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TWENTY-NINE REPRESENTATIVES OF MANAGEMENT, TRADE UNIONS, AND GOVERNMENTS FROM 28 COUNTRIES PARTICIPATED IN A STUDY COURSE DESIGNED FOR PEOPLE WHO HAD ALREADY ACQUIRED SOME EXPERIENCE WITH LABOR PROBLEMS AND HELD, OR WERE LIKELY TO HOLD, POSITIONS OF RESPONSIBILITY IN THE FIELD OF LABOR. ADDRESSED TO QUESTIONS RELATING TO THE LABOR FORCE AND ITS EMPLOYMENT, THE LECTURES WERE--(1) "MANPOWER PLANNING IN THE UNITED ARAB REPUBLIC" BY I.H. ABDEL-RAHMAN, (2) "MANPOWER PROBLEMS IN LATIN AMERICA" BY J. AHUMADA, (3) "LONG-TERM PROJECTIONS OF THE MANPOWER NEEDS" BY M. DEBEAUWAIS, (4) "THE ELEMENTS OF HUMAN RESOURCE DEVELOPMENT PLANNING AND THE INTEGRATION OF MANPOWER PLANNING WITH GENERAL ECONOMIC DEVELOPMENT PROGRAMING" BY F.H. HARBISON, (5) "POPULATION PRESSURE AND EMPLOYMENT OPPORTUNITIES" BY G. ETIENNE, (6) "AFRICAN EMPLOYMENT PROBLEMS AND POLICIES" BY A.A. DAWSON, (7) "A NOTE ON THE NATURE OF MANPOWER SHORTAGES AND SURPLUSES" BY F.W. MAHLER, (8) "EMPLOYMENT SERVICES" BY R. JACKSON, (9) "MANAGEMENT DEVELOPMENT AND ECONOMIC GROWTH," BY R. WYNNE-ROBERTS, (10) "WORKERS' SELF-GOVERNMENT IN YUGOSLAVIA" BY B.U. PRIBICEVIC, (11) "MOBILIZATION OF MANPOWER" BY D.L. SYNDER, AND (12) "SOCIOLOGICAL ASPECTS OF EDUCATIONAL PLANNING" BY R. GIROD. (ET)

LECTURES ON
THE LABOUR FORCE
AND ITS EMPLOYMENT

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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First Study Course: 17 September - 7 December 1962

INTERNATIONAL INSTITUTE FOR LABOUR STUDIES

Geneva, 1963

INTRODUCTION

The first Study Course of the International Institute for Labour Studies, held in Geneva from 17 September to 7 December 1962, was designed for people who had already acquired a certain experience of labour problems and who held, or who are likely to hold, positions of responsibility in the field of labour. These persons were drawn from management, trade unions and governments. There were 29 participants in this Course from 28 different countries.

During the Course a number of lectures were given on questions relating to the labour force and its employment. These were not intended to provide a complete analysis of the subject, but to raise a number of issues which could then be studied more intensively in seminars. The lecturers spoke in their personal capacities and their views do not necessarily reflect I. L. O. policy.

These lectures are being issued in this form to meet the requests of the participants in the Study Course, and I thank the lecturers for having very kindly agreed to this. Reproduction in any other form requires the written consent of the Institute. The whole task of editing and translating the texts has had to be undertaken under pressure, and it has not always been possible to have the texts checked by the lecturer. I should like to apologise to the lecturers in advance for any errors or distortions that may have crept in.

Geneva, 7 February 1963.

Hilary A. Marquand
Director

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MANPOWER PLANNING IN THE U.A.R.

by I.H. Abdel-Rahman

In dealing with manpower planning in the U.A.R. I think it may be useful to give you a few figures which describe the general situation of population:

Table I

The Growth of the Egyptian Population 1800-1960

Year	Population (millions)	Percentage growth rates	Urban Population	
			% of total pop.	Average Family Size
1800	2.5	1.0	-	-
1846	4.5	1.5	-	-
1882	6.8	2.4	-	-
1897	9.7	1.5	-	-
1907	11.3	1.2	-	-
1917	12.7	1.1	21	5.8
1927	14.2	1.0	23	5.7
1937	15.9	1.9	25	5.0
1947	19.0	2.4	31	4.7
1960	26.1		38	5.0

Note: population density per square kilometer rose from 466 in 1937 to 545 in 1947, and to 739 in 1960.

With a population of over 26 million, increasing at the rate of 2.5 per cent. per annum, and considering the population density of over 700 inhabitants per square kilometer excluding the desert areas, which are practically uninhabited, it becomes clear that manpower planning should be a subject of great importance.

Table I shows that urbanisation is gradually increasing, while the family size is decreasing. The significance of such long-term trends to population structure, occupations and general development of the country are obvious.

With a slight preponderance of females over males, the total manpower amounts to 15 million persons (see Table II). But the labour force is only 26 per cent. of the total population. As can be seen from Table II, only 2 per cent. of women are counted within the labour force, while the corresponding ratio for men is over 50 per cent. One should be careful when interpreting statistical figures about employment, especially when they refer to women (and a generally rural population) in developing countries; so much depends upon the definitions used. In some published statistics about female employment in countries comparable to the U.A.R. much higher ratios are given; undoubtedly owing to the differences in definition.

Table II

The Urban/Rural Structure of Population, Manpower, Labour Force, by Sex U.A.R. 1961

Region and Sex		Total Population (000)	Total Population %	Manpower (000)	Labour Force (000) Empl.	Labour Force (000) Unempl.	Labour Force (000) Total	Labour Force % of total pop.
Urban	M	4813	19.08				2099	8.32
	F	4820	19.11				151	0.60
	Both	9633	38.19	5658	2096	154	2250	8.92
Rural	M	7718	30.60				4215	16.71
	F	7872	31.21				124	0.49
	Both	15590	61.81	9485	2184	155	4339	17.20
All	M	12531	49.68				6314	25.03
	F	12692	50.32				275	1.09
	Both	25223	100	15143	6280	309	6589	26.12

In advanced countries, the labour force may reach 30-40 per cent. of the total population. Manpower planning has as object, to suggest policies and means by which, the growth of population, and the consequent increase (both in absolute terms and in relation to the total population) in the labour force may be best adjusted to the social and economic developments in the country. Thus it is necessary to study in detail the structure of the labour force as regards its distribution according to age, occupation, economic activity, skill and qualifications. The future development of the labour force, in numbers, and according to skill and occupation, is necessary for economic and social development.

Tables III and IV summarise the present situation in the U.A.R. A small number of economic activities and occupation groups is given, but naturally, for detailed studies more refined subdivisions must be used.

Table III

% Distribution of Labour Force by Economic Activity

Economic Activity	Urban Pop.	Rural Pop.	Total Pop.
Agriculture, etc.	9.97	79.28	54.47
Manufacturing Industries	19.66	2.80	8.84
Construction	4.24	0.65	1.93
Electricity, Water, Gas	0.88	.00	0.32
Commerce	17.84	5.53	9.93
Transport and Communication	8.01	1.12	3.38
Government Employment	12.85	3.69	6.97
Services	23.52	6.18	12.39
Others	3.03	0.75	1.57
TOTAL:	100.00	100.00	100.00

Table IV

% Occupational Structure of the Labour Force

Occupation	Urban	Rural	Total
Professional and Technical	6.01	1.01	2.80
Executives, Administrators	3.26	0.31	1.37
Clerical Workers	8.33	0.62	3.38
Sales Workers	14.90	4.93	8.50
Farmers, etc.	9.68	77.88	53.46
Transport	6.10	1.27	3.00
Craftsmen and labourers	30.96	6.44	15.22
Services - Recreation, Entertainment	17.50	6.81	10.64
Others	3.26	0.73	1.63
TOTAL:	100.00	100.00	100.00

As can be seen from those two tables, agriculture as an economic activity accounts for 79.28 per cent. of the rural population (and 54.47 per cent. of the total population), but farming as an occupation accounts for only 77.88 per cent. of the rural population. The difference is explained by the fact that agricultural activities require the employment of people of different skills, in addition to farmers.

The ratios in Table III show clearly the distinctive differences between rural and urban areas, as regards the various main economic activities. Manufacturing industries, commerce and services account for more than 60 per cent. of the labour force in urban areas, and for less than 15 per cent. in rural areas.

Table V shows the percentage age structure of the total population and of the labour force, divided into rural and urban sectors.

Table V

The Percentage Age Structure of Population and Labour Force

Age Groups (yrs.)	Population 1960	Labour Force 1961		
		Rural	Urban	Total
0-	18.8	0	0	0
6-	17.3	0.44	1.01	0.65
12 -	9.7	6.23	6.04	6.16
16 -	6.1	9.31	7.56	8.68
20-	12.2	20.56	19.22	20.08
30-	12.6	23.37	24.47	23.12
40-	9.6	18.93	21.34	19.79
50-	9.4	18.72	18.29	18.57
65+	4.3	3.44	2.07	2.95
TOTAL:	100.00	100.00	100.00	100.00

Very few persons in the age-group (6-12) are considered within the labour force. The bulk of the labour force lies between the ages of 12 and 65. This is a matter of definition, which reflects a reality in the society. Below the age of 12, most children are in school, and labour legislation does not allow the employment of children under age.

If the primary compulsory education, which extends now up to the age 12, is expanded to age 14 or 16, as it is the case in more advanced countries, then the labour force structure will change accordingly.

With the high rate of population growth, the percentage of young people is large, hence the greater need for supporting the young, educating them and eventually creating gainful employment for them. If the average expectancy of life is not long it means that the number of years each trained adult worker gives to the society will be small. This creates a further burden unless conditions change in such a way as to make the investment in human resources of greater benefit to society.

To benefit best from the human resources available it is necessary to increase skills in the society, and to direct skilled workers to activities suited to their skills. Education and training are the two main instruments of skill formation. Labour policies and wage-incentive policies should ensure the best utilisation of available skills. Each economic activity in the society, in order to be accomplished requires a certain skill-mix, i. e. a certain relative distribution of skilled workers.

In order to illustrate this situation in the U. A. R. Tables III and IV given before, can be combined with further data to give the occupational structure of the various economic sectors. With the increase of skill, productivity should increase: hence the increase in income per capita. But development also needs capital investment. Manpower policies should be devised in co-ordination with capital investment plans in the various sectors of economic and social activities, so as to realise the highest productivity both of labour and of capital invested. Development planning, therefore, depends upon the introduction of better technologies (through investment) and upon the increase of skill and productivity (through human resource development and manpower planning).

Manpower planning problems, therefore, may be considered in their over-all aspect, covering the whole economy, or they may be discussed as regards a particular sector, or a specific group. In this way we define macro and micro-planning problems.

There are problems, too, which by their nature take a long time to solve, anything from 5-20 years. These are called long-term problems. One of them is to change the educational structure in the country. Then there are problems that can be tackled successfully within a few years. These are short-term problems, such as labour market employment-exchange activities.

Besides, we can also differentiate between supply and demand manpower planning problems. Supply problems deal with the creation or formation of skilled labour and trained personnel to satisfy a given demand for them. If the demand is immediate, then the supply problems will be short-term, and can be dealt with only through wage policies, increasing mobility of labour or by other short-term policies. On the other hand, if the demand is for a future date, then suitable policies of training, education and selection may be suggested.

Demand problems in manpower planning deal with the qualitative and quantitative needs and requirements for skills as indicated by economic and social development. They transform such production and social objectives or estimates as may exist for the future, into skills and occupations. We should, however, be careful not to imagine that demand and supply problems of manpower exist separately or independently from each other. On the contrary, in many cases, the existing or expected supply of manpower directly affects the demand. Conversely, there are situations when the current demand situation induces effects in the immediate supply.

In the continuous process of attempting to reach a balance between supply and demand, it becomes necessary to establish standards with which to measure manpower quantitatively and qualitatively. Standards have to be established locally, though they may be adapted from outside experience. Many problems of manpower planning can be reduced essentially to problems of standardisation of units, skills and qualifications. This is particularly so in developing countries, where new institutions of supply of skill are established, and where future demand has to be estimated without much past experience. It is obvious that the lack of suitable standards will be an obstacle in solving manpower problems whatever their nature.

In dealing with the labour problems of a small enterprise, for example, the manager may draw on the available skill in the market, or he may introduce a new technology or a new procedure of management. This is a small-size partial problem. But if we are dealing with some labour problem relating to the whole industrial sector in a country, or even to the total national economy, we cannot draw on the labour market, or change the whole technology in the society. Thus we can also distinguish manpower problems with reference to their size in relation to similar problems.

In the U. A. R., with a population of 26 million, increasing at the rate of 2.5 per cent. every year, and considering that the labour force amounts to 26 per cent. of the total population, we can easily deduce that the annual increase in the labour force is about 170,000 persons. This figure is a minimum, since it does not include the increase due to the gradual expansion of the labour force relative to the population as a whole. This figure is also a net figure, i.e. it represents the difference between the total annual inflow into the labour force and the total annual outflow due to death, sickness and retirement. The inflow into the labour force takes place at different age-groups, and it corresponds approximately to the outflow from the school system, to which must be added a smaller number corresponding to persons entering the labour force not through the educational system.

The education system in the U. A. R. is composed of a primary compulsory school (from age 6 to age 12), then an intermediate school (age 12 to age 15), a secondary school (15 to 18) and post-secondary education, including universities, vocational training institutes and teachers' training institutes. Table VI shows the numbers of students flowing out of each school, and the expected numbers entering the labour force, in 1964-1965, according to the general development plan.

It is the task of manpower planning, in its macro-long-term aspect, to adjust to the changes that take place in the labour force, year after year, due to the difference in numbers between the inflow and outflow, and due to the difference in skills. This must gradually lead to a better balance between supply and demand of manpower and to better utilisation of skills.

Table VI

Outflow from the Education System
as Expected in 1964-1965

Type of Graduates	Total Outflow	Number Entering Labour Force
Primary	477, 000	310, 000
Intermediate		
General	104, 600	28, 240
Industrial	9, 888	9, 888
Agricultural	3, 676	3, 676
Commercial	3, 465	3, 465
Others	2, 386	2, 386
In-plant industrial	858	858
Secondary		
General	27, 750	8, 047
Industrial	8, 032	8, 032
Agricultural	4, 120	4, 120
Commercial	13, 714	13, 714
Others	2, 552	2, 552
Teacher Training Institutes		
Secondary graduates	5, 456	5, 456
Higher graduates	3, 872	3, 872
Vocational Training Institutes		
(Industrial and Commercial)	1, 300	1, 300
University Graduates	16, 304	16, 304
TOTAL:	684, 973	421, 910

The general five-year plan of social and economic development (1960-1965) includes estimates for the increase in employment and total wages in the different sectors of the economy. These estimates are summarised in Table VII.

Table VII

Development of Employment and Wages in the Main Sectors of the Economy. U. A. R. (1959/1960 - 1964/1965)

Numbers in 1000, Wages in millions £E. (Egyptian pounds)

Sector	1959-1960		1964-1965	
	Number	Wages	Number	Wages
Agriculture	3, 245	135	3, 800	171
Industry	632	91	847	155
Construction	170	34	159	33
Services and Trade	1, 928	282	195	366

As mentioned above, the increase in employment depends essentially on the increase of production, through capital investment, and higher productivity. The capital investments estimated in the five-year comprehensive plan of the U. A. R. (1960-1965), total more than 1, 500 million £E. with an average of 1, 500 £ E. for each new job created. Table VIII shows the allocation of capital investment for the different sectors.

Table VIII

Capital Investments for the Different Sectors U. A. R. Plan (1960-1965)

(millions £. E.)

Sector	Investment	Sector	Investment
Industry	439	Irrigation	119
Transport	236	Services	111
Agriculture	225	Public Utilities	49
Housing	174	High Dam	47
Electricity	140	Suez Canal	35

The capital investment creates new opportunities for employment. Further opportunities will be created by increasing production from existing establishments. Hence we can also refer the increase of employment to the expected increase of production, making allowance for the higher productivity expected. Production should be measured in physical units, or expressed in value terms at fixed prices. As an example, the Development of Industrial Production in the U. A. R. during the plan period (1960-1965) is given for a number of detailed sectors, in Table IX.

Table IX

Development of Industrial Gross Production

(millions £.E.)

Industry	1959-1960	1964-1965
Cotton ginning and pressing	149.7	191.3
Coal mining	.....	3.0
Mineral Products	2.7	13.5
Crude Oil	14.5	45.0
Quarrying	1.7	3.4
Other Extraction Industries	3.1	9.5
Food Industries	419.0	539.6
Beverages	6.8	7.9
Tobacco	60.3	80.2
Textiles	160.3	252.0
Clothes and Shoes	28.9	34.4
Wood Industries	17.1	24.2
Paper Industries	2.9	18.2
Printing and Publishing	20.3	34.2
Leather Industries	8.8	11.7
Rubber	6.0	8.8
Chemical Industries	31.2	107.7
Oil Products	43.3	98.9
Non-Metallic Products	21.3	28.2
Basic Metallic Industries	18.8	124.4
Metallic Products	18.4	33.4
Non-electric Machinery	2.3	19.0
Electric Machinery	6.0	17.6
Transport Industries	14.5	41.4
Other Industries	18.0	20.0
Electricity	18.3	35.1
TOTAL:	1,094.2	1,813.9

During the period of the plan, the educational and training facilities also will be developed; and as a result of this educational development, there will be changes in the structure of the outflow from the education system by the end-year of the plan. But education is a slow sector to change, hence in planning education periods longer than five years must be considered. For a period of five years, the number of graduates from schools and their qualifications are almost determined from now. Table X shows such data for the next four successive years.

Table X

Projected Numbers of Graduates by Type of Education in the U.A.R.

(thousands)

Type of School	1961/62	1962/63	1963/64	1964/65
I. Intermediate				
General	57.8	76.7	96.3	104.6
Industrial	5.6	7.2	8.5	9.9
Agricultural	2.2	2.9	3.2	3.7
Commercial	1.6	1.6	2.6	3.5
Others	1.8	2.3	2.7	3.2
II. Secondary				
General	30.9	37.8	30.5	27.8
Industrial	5.7	7.2	7.9	8.0
Agricultural	3.1	3.5	3.5	4.1
Commercial	9.3	12.6	13.7	13.7
Others	2.4	3.1	2.5	2.6
III. Teaching Institutes	1.3	1.5	1.5	1.5
IV. Other Institutes	1.6	2.2	2.6	2.4
V. University				
Law and Liberal Arts	3.8	4.3	5.2	5.6
Commerce	2.0	2.5	3.3	3.8
Economics	-	0.02	0.08	0.1
Agriculture	0.8	1.0	1.4	1.6
Engineering	0.9	1.2	1.6	2.0
Science	0.6	1.0	1.2	1.2
Medical	0.5	0.6	0.7	0.8
Others (5 faculties)	0.9	1.0	1.1	1.2

The education system in the U. A. R. has expanded considerably during the last ten years, yet much has still to be done to cope with ever increasing needs in a society which is rapidly becoming industrialised. The increases in the school population in the U. A. R. since 1925 are summarised in Table XI for primary and higher education, i. e. for the two ends of the education ladder.

Table XI

Total School Population in the U. A. R. (1925 - 1960)

(thousands)

Year	Primary Schools	Universities and High Education
1925	172	4.4
1935	695	7.6
1950	1095	33
1955	1861	67
1960	2610	107

Primary education has thus expanded by a factor of 2.4 during the ten years (1950-1960), while higher education has expanded 3.3 times during the same interval. Undoubtedly an important reason for the educational expansion has been the growing demand for educated graduates, yet we cannot neglect the fact that there are excess supply in certain types of graduates, and very severe shortages in other types. The education development, for many reasons, was not fully directed towards solving the expected manpower problems. The function of education is not just to produce trained labour for work; it is also an end in itself in a modern society. Yet education could, and to a very large extent should, be planned to satisfy both needs.

The education system in the U. A. R. is now free all the way from the primary compulsory school (ages 6-12 years) up to the university and post-graduate education. In the next ten years considerable developments will take place in engineering and science education, both at the higher and secondary levels. Primary school enrolment will approximately double, and technical training facilities to produce highly skilled workers will expand greatly.

The main directions of change can be indicated by a rough comparison between the U.A.R. and one of the industrially advanced countries, although such a comparison should only be indicative, and cannot be used for detailed planning. The Federal Republic of Germany has been used for the purposes of the comparison given in Table XII.

Table XII

Relative School Population in the U.A.R. and Germany

(per thousand innabitants)

School	U. A. R.	Germany
Primary	100	60
Intermediate	10	60
Intermediate (vocational)	1.5	-
Secondary	5	2.6
Secondary (technical)	(3.25)	(50)
Post Secondary Technical	(0.13)	(3)
Higher and University	4.50	2.5
TOTAL:	124.38	178.10

From this Table it is observed that technical education in the secondary and post-secondary levels (indicated by brackets in the Table) needs large expansion in the U.A.R. The smaller numbers of secondary and university students in Germany are also significant. The intermediate education in Germany is compulsory, while it is not in the U.A.R. The larger number of primary school children in the U.A.R. is due to the population age structure. This number will still be larger in the future when primary schools accommodate all children in the age group 6-12 years (see below).

The primary education development plan in the U.A.R. is made to ensure the admittance of all children at the age of 6-7 years to the school by 1970. At present only 77 per cent. are admitted. Ten years ago the ratio of admittance was only 40 per cent. Table XIII shows in outline the plan of primary education.

Table XIII

Summary Plan of Primary Education Development in the U. A. R.

(1960-1970)

Year	children in age (6 - 7)	children to be admitted	percentage admittance
1953	600,000	270,000	45
1958	670,000	500,000	75
1961	710,000	550,000	77
1964	760,000	660,000	87
1970	840,000	840,000	100

For higher and university education an enquiry is presently in progress; but it is already clear that there will be shortages in certain professions by 1970, and surpluses in others. The situation may be improved if some short-term measures are taken to redirect the flow of graduates from secondary schools towards engineering and science. The provisional figures of the enquiry are given in Table XIV.

Table XIV

Plan of Supply and Demand of University Graduates

(1960-1970)

Graduates	Presently Employed	Estimated Accum. Demand by 1970	Estimated Accum. Supply up to 1970	Shortage - Surplus +
Engineers -				
Mechanical	1,896	5,624	4,459	-1,165
Architects	916	1,580	889	- 691
Civil	2,006	3,456	3,108	- 348
Chemical	283	1,030	861	- 169
Oil	28	70	371	+ 301
Mining	76	276	546	+ 270
Law	7,159	6,218	10,556	+4,338
Language & Art	1,978	16,206	21,453	+5,247
Commerce	7,609	23,146	21,703	-1,443
Geology	255	598	989	- 391
Mathematics	2,953	1,730	901	- 829

The imbalance between supply and demand may be partially eliminated by suitable corrective measures. The method of enquiry used to reach the estimates given in Table XIV is not usually accepted as being accurate enough, and improved figures may be arrived at later by other methods.

For secondary education, the educational planning studies for the period (1960-1970), suggest re-allocating existing capacity to expand the industrial education. See Table XV.

Table XV

A Suggested Re-Allocation of Educational Facilities in the U.A.R. to balance Manpower by 1970

Secondary Education	Present Allocation	Plan
1. General	45.5	42.4
2. Industrial	20.3	34.6
3. Commercial	20.0	6.6
4. Training Colleges	14.2	8.0
5. Technicians	-	8.4
TOTAL:	100	100

It is hoped that through the implementation of the education plans, and others, the structural long-term problems of manpower supply will be solved. In the meantime, there are other plans on the demand side, plans of a short and medium-term nature, and problems of standardisation. All these policies together constitute the general manpower planning activity in the U.A.R.

One wonders about the situation of manpower planning in advanced countries where such detailed long-term plans were not needed, at least in the past. In advanced Western countries in the past built-in mechanisms continuously created the development of skills, and balanced out supply and demand. More recently, with the changing situation due to scientific and technological advances and world tensions, it has been necessary for many advanced countries to further develop manpower policy

implementation instruments. Labour exchange activities, and wage-policy adjustments, have been supplemented by educational reforms and general plans of economic and social development.

In developing countries it is necessary to establish machinery for manpower forecasting and planning. Education and training machinery work on the supply side. Economic development and social change agencies estimate and create new demands on manpower. Labour departments, and statistical offices study the situations of labour and employment generally. The legislative machinery in the country proposes new laws and principles of labour relations. Social insurance systems are provided as well as services to the modern organised sector of the working population, and these services are steadily growing. Besides, mobilisation authorities register skills and develop skill classifications. There are many agencies active in the field of manpower planning; some of them chiefly concerned with micro-problems, while others work on macro-problems. Some of them deal with short-term policies and current situations, while others plan for the long-term, and so on. It should be asked whether it might not be necessary or advisable to group together all agencies working in the field of manpower planning, instead of allowing them to carry on separately. This is hardly possible, and to my mind, not even necessary. What is necessary, on the other hand, is to create a system of consultation for the better study and co-ordination of manpower policies.

When central comprehensive planning machinery exists in a country, as is the case in the U.A.R., it is useful to formulate the general macro-plans of manpower, yet, for more specific and detailed aspects, other agencies should be actively engaged within the frame defined by the general plan of social and economic development in the country. It is not right to consider manpower planning problems at any moment separate from the social and economic context in which they arise. The relations between labour and production, between students and jobs, between wages and incomes, etc. are not simple relations. They reflect in complexity the structure of the whole society. Hence one should approach manpower planning problems with a clear recognition of the fact that they are human problems, affecting people, families, sentiments and interests of living human beings, with emotions, expectations, fears and hopes. Manpower planning is far from being a function of fitting people to jobs, rather it is an organised scientific endeavour to serve best the people individually and as a related social group, now, and also in the foreseeable future.

(This lecture was originally delivered in English)

MANPOWER PROBLEMS IN LATIN AMERICA

by J. Ahumada

The first thing I did when I was asked to deal with the Manpower Problems in Latin America was ask myself how I was going to analyse them. I think that in this respect there are two points-of-view one can consider. First, one can think of manpower problems in a narrow sense or in a broad sense. I would say that in the narrow sense manpower problems are problems of wage-earners and salary-earners. If one wants to look at the problem in the broad sense this implies consideration of all the labour force including students above a certain age - as obviously they also form part of the labour force, and are also contributors to capital formation, to the accumulation of capital. I emphasise this because I think all those who are interested in manpower problems should try to understand capital formation in a broader sense than that which is generally accepted.

The other aspect I wanted to consider is - how do you focus the concept of manpower problems, - not how widely but from what angle? I think you can look at it from three different angles. Firstly, you can examine the problem exclusively from an economic point-of-view and the pertinent questions in this case would be connected with the optimum utilisation of available manpower and the optimum growth rates of different factors of production: manpower, capital, national resources. You know they can grow at differential rates which are not necessarily fixed and consequently you have the choice of having both qualitative and quantitative growth of manpower at different combinations of rates with capital and national resources. Then you might have, if you allow me to use the term, an emphasis on class structure. The term may be used in a Marxist sense or in the broader sociological sense of social groups. The focus is on the different components of the labour force and classes of a society. Wage-earners might be considered as one class, employers as another and independent workers as a third social class.

If you want to consider the manpower from this angle there are, to my mind, two main problems. First, there is the question of how to distribute burdens and benefits of social economic activity, and secondly, how should these classes participate in decisions in society? There is, to put it more bluntly, the problem of how these groups participate in power - in its political, economic and other forms.

In my view, in an underdeveloped society, the manpower concept which must be accepted is the broad one to which I have referred - that is, you have to consider manpower as the labour force as a whole. And you cannot have a purely economic approach or a purely sociological approach, you should have a global approach. You have to consider the problems from an integrated point-of-view, both economically and sociologically. I like to emphasise this because it seems to me that the specialists in manpower problems have too narrow a point-of-view and tend to concentrate on the economic aspects of the problems of manpower.

After this brief introduction, I will now examine the manpower problems in Latin America which have mainly economic significance. In the second part I will examine the problems that have both a social and political significance. Finally, I shall bring these two things together to justify my position.

The main problem of manpower in Latin America is employment. It should be noted, however, that the situation in my region differs from that in other undeveloped areas in that we do not suffer from population pressure. There are several reasons why the employment problem is the most serious problem in Latin America. Population is growing too rapidly; the average rate of growth of population of Latin America is 2.4 per cent., the highest in the world, and some countries have a rate of over 3 per cent. per year. Underdeveloped countries are usually underdeveloped in statistics as well, so we do not trust them very much, but as this is all we have to go on we have to base our judgment on this type of information. The second reason why the employment situation is so serious in Latin America is because the participation of women in the labour force is growing very rapidly. The third reason is that the age structure of the population is beginning to influence the employment situation. You probably know that the population of all underdeveloped countries is very young; - that is they have a very high ratio of people less than 15 years old. In Latin America this ratio is around 40 per cent. But this ratio is changing as consequence of the demographic development that has taken place in the last 20 years. In the fourth place because industrial productivity is increasing very rapidly, manpower productivity in Latin America is also increasing very rapidly. In the fifth place the migratory movement from country to city is extremely marked, the urbanisation rate of Latin American countries again being the highest in the world. The last reason, which has not such an obvious connection with the employment problem, but is important, nevertheless, is that aspiration for a better standard of living has grown much more rapidly than possibilities for providing higher levels of living.

If it were not because of productivity increases and because of the migratory movement, the employment problem would not be too serious. We economists use very much a little formula, in which "r" is the rate of growth of income or the rate of growth of production percentage-wise. Alpha is the rate of investment, - the proportion of income which is devoted to investment; and beta is what is called the ratio of product to capital, - how much product you get per unit of capital that you invest.

Suppose we wish to know if all the people who have entered the labour force will find employment. We know that the rate of growth of the labour force in Latin America is higher than the rate of growth of population, (it is 2.6 per cent. per year), and so in order to provide employment for these people we should have, (if productivity or manpower is not increasing), an increase in production of 2.6 per cent. at least. That means that the rate of growth of output has to be 2.6 per cent. The productivity of capital in Latin America is known. Our estimate has been that the ratio is .5 - that is, if you invest 100 you get 50 per year during the life of investment. Knowing these two elements, alpha remains the unknown.

These figures show a net investment equal to 5.2 per cent. of the national income. This investment increases capital stock, so, if I assume that replacement investment needs are about half of the total investment then it might be concluded that we need to have a 10.4 per cent. rate of savings or investment in order to provide employment to meet the increase in the active population. A rate of 10 per cent. of savings is not an impossible task considering the general level of income in Latin America which is much higher than the level of income of the African and Asian countries.

Income is around 350 dollars per head. Thus, in the community of nations Latin America is in the middle-income group. But the problem is complicated because there is in fact an increase in the rate of productivity of labour of around 2.4 per cent. With the labour force increasing by 2.6 per cent. this means that we need to create employment opportunities at a rate of 5 per cent. per year, which, by calculation, calls for a rate of investment of savings of 15 per cent. per year, which is already a rather considerable amount.

But this again is based on the assumption that the only two enemies we have to consider are an increase in the labour force and an increase in productivity of the labour force. But I mentioned that there are two further complications. One is the movement of people from the countryside to the cities, which calls for considerable investment in social capital, in the form of sewerage and water facilities, paving of the streets, construction of new houses, more transportation, etc. These types of investment do not have such a high relation between capital and product. For instance, in housing, for every 100 that you invest you get a product per year which is around 10-14 at the most. So productivity of capital is decreased and you require more capital to provide the same quantity of investment.

This, then, is our first problem, - the problem of providing employment for a rapidly growing population with a scarcity of capital resources. Our second problem is productivity. Manpower productivity in Latin America is very low. In relation to European countries productivity is around one-third of that of the labour force in Europe. The average per capita income of the Latin American is even lower. Our income is around one-fourth of the European income, yet our productivity is only one-third. The reason for this is that we have, perhaps, one of the lowest ratios of labour force to total population.

Now the differences in productivity cannot be assessed by comparing developed countries with underdeveloped countries. This is a bad mistake that is frequently made. The structure of production and the combination of factors of production, are very different in underdeveloped and developed countries. What we should do is to devise a norm which would allow us to judge whether productivity is low or high or satisfactory. We do not yet have that norm and I think that one of the responsibilities of people dealing with such matters is to develop some kind of norm to judge the productivity of a region.

You have, then, to take this statement with all its limitations. But I want to add in comparison with European productivity, and, North American productivity, which is, of course, higher, one of the main reasons for this is low productivity in agriculture which is only 46 per cent. of the average productivity of the labour force. If you compare productivity in rural areas in Latin American countries with productivity in rural areas of more developed countries, the differences are much greater than the differences you can register, for example, in productivity in the textile or any other industry. The reasons for this are clear. Agriculture is much more influenced by the availability of natural resources, and by the special techniques developed in each country. In manufacturing we take the developed countries' techniques and use them in our countries so the differences are not as great as in agriculture where we cannot do this.

It would appear to be inconsistent to say that one of the problems of Latin America is employment and the other problem is low productivity, since the higher the productivity increases, the more difficult it is to employ the population. But perhaps this inconsistency is more apparent than substantial. It is in part true and in part false that there is a contradiction between increases in productivity and possibilities for employment. We have to analyse the main ways of increasing productivity. One very important way is transferring population from sectors with low productivity, to sectors with high productivity. Generally this involves transferring people from agriculture to non-agricultural employment. Usually these non-agricultural activities have a capital requirement per person which is much higher than the capital requirement for creating employment in agriculture. Consequently, as we transfer people from agricultural to non-agricultural occupations, we increase the demand for capital which in turn leads to an increased productivity, making the employment problem more difficult. If you increase productivity in this way you have an inconsistency or a conflict between the two objectives of high productivity and high levels of employment.

Another way of doing this is by substituting highly mechanised methods for manual methods in one activity. This, of course, again, is a method of increasing productivity which is inconsistent, or at least competitive with the objective of providing employment to a rapidly growing population.

Finally, there is the method of making the existing labour force, or whatever labour force we are going to have in the future, use whatever resources they work with much more efficiently. This implies better organisation, a considerable change in attitudes of workers and employers towards their social responsibilities, a lot more discipline, much more attention to waste, etc.

With respect to the first method of increasing productivity - the transferring of population from low to high productivity sectors, - we have not much choice here. Every process of development is a process of the change in the structure of production and employment. Development without this change is very unlikely. Now, Latin America has at least 50 per cent. of her population in farm operations, and if we really want to transform our medium income countries into high income countries we will probably have to reduce the proportion to 25 per cent., i.e. half of what it is today. While at the same time we are necessarily faced with productivity increases which are high consumers of capital and, consequently, high creators of unemployment.

In order to minimise the unemployment effects of these productivity increases, Latin America will have to search very intensively for ways that will permit the increase of productivity through the third method I mentioned, i.e. through better organisation and better attitudes and better co-operation. We will have to try to see that the shift of employment from these low productivity sectors to the high productivity sectors, and the substitution of highly mechanised methods of production for low mechanised methods of production, is done with techniques which are less capital consuming. That is, we have to devise our own techniques, we have to adapt whatever capital-intensive techniques the developed countries have to our own conditions.

Finally, we have in relation to the economic problem of bottlenecks, the problem of maladjustment between manpower supply and demand at the sectorial level. Again you might think that there is an inconsistency here. How can we have a shortage of skilled manpower if we have an employment problem? You can have both, because your rate of growth may be too low to absorb your population growth, yet it may be too high for the increase of supply of skilled workers. The two things are compatible. Furthermore, you may have a great change in the structure of your economy without development;

for instance, as in the case of Argentina, considerable change in the structure of production without much increase in the rate of growth. Again, in Chile, the average per capita income in the early 1950's (the last year for which I have information) was as high as in the late 1920's, and I think there are countries with similar experience in Asia. In the 1920's Chile had around 40 per cent. of the population in rural areas; now less than 25 per cent. are in rural areas. That is a very considerable change in structure without development, and this sort of change can result in what I call bottlenecks or sectorial maladjustment.

You can solve this problem of maladjustment by using, for instance, a large capital investment when you have lack of skilled labour. Sometimes capital can be substituted for skilled labour or you can solve the shortage of manpower in any specific sector by utilising your capacity more intensively.

The first method of solving your shortage of skilled manpower, by investing more capital instead, is again a creator of unemployment. Although unsatisfactory for this reason I would say that this has been the solution that has been used in Latin America most extensively. The rate of growth of total income of Latin America has been 5 per cent. per year, during almost 15 years, up to 1958 - because in 1958 we started to have troubles. But if you have a 5 per cent. rate of growth during 15 years this might lead one to ask whether it is true that manpower is such a strategic factor in economic development. Is it, simply, that we were not prepared for such a rapid growth of manpower? That is a question which you may wonder about. Although I am not going to try to provide an answer, except very indirectly, I do think that this is the kind of problem that one should be concerned about.

I want to point out finally some of the specific maladjustments in Latin America. First, there is the maladjustment of highly skilled manpower which is complementary with capital and that arises in modern activities. The type of maladjustment here is that demand exceeds supply. Then we have the maladjustment of what I should like to call the uneducated literates who are very common in underdeveloped countries: obsolete specialists whose supply exceeds the demand. Then we have, to me the most important type of shortage in Latin America, the shortage of manpower experts in organisation, decision making and rationalisation. Here, naturally, demand exceeds the supply very widely.

Now, these are the three economic problems that are to me the most important for Latin America, and I think, as I said before, these economic problems cannot be understood, unless we examine them from the social and political angle. The political and social aspects lie in the question of how burdens and benefits of social activity are distributed among the different members of the labour force, and deal with the participation of these groups in decision making, both at the national and industrial levels.

With respect to benefit distribution there is very little information in Latin America, but we can say objectively that it is unsatisfactory in the sense that the income distribution is very unequal. The existing income distribution in Latin America produces great inequalities in opportunities for education, leading to a severe limitation of the basis on which the intelligentsia is recruited. We have a social pyramid in Latin America with a very thin top and it is from this thin top that society is providing the people it trains for high skills both at medium level and at university level. This income distribution is the cause of great inequality in participation in decision-making.

We have also very little information on the distribution of burdens. But there are certain indicators which suggest that burdens are also very unequally distributed. For instance we know, on the basis of certain studies, that people of high income level in Latin America are consuming a much higher proportion of their income than people with similar income levels in developed countries. That is to say, the top 10 per cent. of income earners consume a much higher proportion of their income than the top 10 per cent. of income-earners in the United States or Europe. We also know that low income-earners contribute to government savings much more than the high income-earners.

From the point-of-view of participation in power, there are societies where only the employers have power, there are other societies where power is diffused. I would say that most of the so-called capitalist countries have a process of diffusion of power. Labour unions in the United States have much more power than labour unions in my country, relatively speaking. In Latin America there is a very rapid process of diffusion of power. Labour unions as popular bodies, are increasing their participation in political power. Low income groups are enjoying greater participation in the educational system and in the whole system of mass-communication. But I want to point out that the process of diffusion of power has gone much more rapidly, to my mind, than the process of acquiring a capacity for making decisions, for participation in power; and this, of course, has great implications for the whole question we have been discussing. Thus, knowledge of the economic problems of manpower and development has been lacking. Conflicts between the different members of the manpower force have affected the rate of growth and affected the changes in productivity and have, thereby, transformed the process of cumulative adjustment. The influence of this very abstract idea can be found, in for instance, the tendency of employers to use highly mechanised methods in spite of the existence of a large labour force with a low level of wages.

Then on the other side there is the resistence of workers to rationalisation, for which there is no apparent reason unless you are operating in a society in which the degree of participation of the labour force in policy decisions is negligible, or, even if there is such participation, the labour force is not in a position to understand that the process of rationalisation is in their own interests.

Many people who are interested in labour problems complain that in Latin America labour unions are infiltrated by political elements. This is something that will have to be solved in due course, but without losing sight of the need for trained leadership and perhaps not through attempting to make a clear division between the labour movement and politics. The problem has instead to be solved economically and politically and we have to see that the labour movement does not copy completely the institutional set-up of advanced countries. It should be an emulator in the field of organisation, but at the same time should always bear in mind the functions that the labour movement has, and has to have in an underdeveloped and rapidly transforming society.

(This lecture was delivered originally in English)

LONG-TERM PROJECTIONS OF THE MANPOWER NEEDS

by M. Debeauvais

The problem of projecting long-term manpower needs is no doubt a technical one but it is not the technical aspect which will concern us in this paper. I want above all to illustrate that this problem has an important place in economic and social development programmes taken as a whole, and that it does not include only questions of manpower but also is relative to those of education, vocational training and economic development.

The significance of this problem has only been recognised comparatively recently. Economic theory and the economic policies which have been pursued by governments have above all accentuated the importance of material resources, no doubt because capital was considered to be scarce and that, on the contrary, manpower was always abundant and even over-abundant.

In the so-called underdeveloped countries clearly the most noticeable feature of manpower problems is unemployment and underemployment, and it is for this reason that, in their calculations, planners have applied methods which are based mainly upon considerations of material resources. For example, in order to evaluate the needs of an underdeveloped country, capital co-efficients have been used in order to underline the need for international aid and there has been an attempt to evaluate requirements in terms of millions of dollars of foreign aid.

The same is true of productivity. The idea of labour productivity rests on the hypothesis that man is an interchangeable unit, always available on the market. Labour productivity is calculated through a relationship between the number of hours worked and the product obtained.

Nevertheless experience shows more and more that it is the shortage of skilled manpower which prevents or slows down the execution of development programmes. It is even thought now that one of the factors limiting the capacity to make use of capital in underdeveloped countries is precisely this shortage of skilled manpower. There is an overabundance of unskilled manpower but a shortage of skilled manpower at all levels.

Recent economic research undertaken mainly in the United States seems to indicate in another way the importance of the human element in the economic development. In attempting to measure the growth of the American national product over a long period, it became clear that the factors which traditionally are considered as determining ones - that is to say, on the one hand capital and on the other total man hours worked - only accounted for a small part of this growth and that about half of the economic growth in the United States during the twentieth century had to be attributed to a third factor, the components of which have not yet clearly been understood. There is, therefore a gap. Economic theory lacks some element to explain economic growth. It has been suggested that this third factor should include technological research, - that is to say, the money and effort spent by a country on such research, organisational improvements either at the factory level or on a national scale, and finally education which allows of a qualitative improvement in manpower.

An American economist, Professor T. Schultz, has even attempted a quantitative estimate of this qualitative improvement through a measurement of the costs of educating and training the active American population. He found that the growth of this "store" of education was extremely rapid during the first half of the twentieth century, and concluded that this could be at least a partial explanation for the third factor in American economic growth.

Research has also been made into the value of education through a comparison between the individual's expenditure on education and the additional gains which result, in the form of higher salaries, during his professional lifetime. An attempt was made to show that education is not only a consumer good but also a worthwhile investment both for the individual and the society.

On the educational level a new theory has grown up which is related to manpower problems generally. There is at present an extremely rapid development of educational systems in all countries, not only because it is a social necessity, - the right to education is included in the "Universal Declaration of Human Rights" - but also because it is a political necessity. In order to fully participate in the political life of a country the citizens need to be educated. But a third reason is that it is believed that education and training is necessary for economic development.

In this rapid growth of education efforts have been made to concentrate first of all on primary schooling. It was quickly realised, however, that all parts of an educational system are closely linked, so that, if one wishes to increase primary school facilities, secondary schools have got to be established in order to provide the necessary teachers, in just the same way as secondary education is only possible if there are higher educational facilities which can provide the necessary teachers. Because of this inter-relation it has been concluded that one must have an over-all development plan for education. Nowadays many countries have such plans which are either put into practice or else remain on paper.

There has also been an attempt to elaborate regional and continental programmes with the help of U.N.E.S.C.O. A whole series of conferences have now established the objectives for regional plans in Asia, Latin America and Africa. If the needs of such programmes are added up the resultant total shows that educational costs are on an entirely new scale; for instance, in Asia expenditure on education would have to be increased tenfold during the next 20 years in order to achieve the modest objectives which have been set for that region, and the same is true for other continents.

Because of this situation educational programmes are now being incorporated in over-all economic programmes and an attempt is being made to co-ordinate objectives and to see that expenditure (investment) on education is included in investment projects of economic planning generally, and also to see that plans for the distribution of manpower make allowances for the increasing need for teaching staff. This is of necessity a long-term approach since the benefits of education can only be felt after comparatively long time, besides which there are delays involved in the changing of the educational system and in the establishment of new schools: decisions have to be taken, school premises have to be built, teachers trained, and only after all this can one start with actual schooling. It also has to be borne in mind that many more schoolchildren will have to be taught than the number one expects will matriculate since, in less developed countries, there is a large proportion of children who leave school before terminating their studies. In Africa, for instance, these early school-leavers account for nearly 80 per cent. of primary school attendance. Another reason for delay is that those trained workers who do enter into the active life of the country, even if their numbers increase yearly, only change very slowly the existing "stock" of the active population. As a result structural changes in the active population necessitate long-term planning extending to 15 or 20 years, and if one wishes to influence the offer side of the manpower situation to achieve a certain balance with economic development projections must extend over a corresponding time period.

In considering the situation of employed manpower one can see that here also there has been a considerable evolution in ideas. For several years methods for rapid vocational training have been extended and improved. But experience has shown that such rapid training programmes can only be fully satisfactory if the workers involved already have a substantial general education. In this way problems of vocational training are linked to general educational problems.

Under certain circumstances an attempt has been made to cope with these kind of manpower problems through a partial approach by which one calculates the need only of a certain group which, for one reason or another, is considered more important than the rest. For instance, in Europe, in Latin America and in Asia attempts have been made to increase the number of engineers and teachers. But this partial method must, sooner or later, be integrated into an over-all perspective. Engineers are often cited as an illustration of a certain category of workers who should be given priority because of their strategic importance, but in reality the need for technicians, as the collaborators of these engineers, is just as great if not greater, since by increasing the number of technicians available, a certain number of already trained engineers can be channelled towards more important tasks. It has also rightly been said that less developed countries are very short of good administrators, - another strategically important category, but again it can be said that there is also the parallel need to train officials capable of carrying out decisions made by the administrators.

These categories, including, also, entrepreneurs, must all be considered of strategic importance, and one must attempt to find a balance between them rather than artificially choosing one or the other for special attention. The result is that global plans for education based on whole scale long-term projections must be worked out.

In order to plan a long-term projection of the needs of training and education, it is necessary to work out the final pattern of society that one wishes to achieve in the future, and, starting from this basis, to work backwards in order to calculate the changes which must be made in the existing educational system.

The characteristic feature of long-term projection is that nearly all the different elements are susceptible to wide variations, whereas as far as more usual planning is concerned the relationship between these factors is relatively stable since the projected period is only four or five years. This considerably simplifies both the actual calculations and the techniques involved in planning. On the other hand with long-term planning we can envisage influencing the average duration of an individual's economically active life, the participation rate for women and the supply situation so far as employment is concerned, whereas it is practically impossible to do any of these in medium-term planning. It is these possibilities which are the cause of the technical problems involved in long-term projection, but they are nevertheless of practical interest since all the various factors involved are within an area which allows of voluntary change.

These long-term projections are so new that so far very few countries have tried them. Pilot projects could be cited as examples in Italy, France, and Nigeria; but these are really only research projects.

Another characteristic of this kind of projection is that there is no longer any attempt to classify the active population by profession as there is in short and medium term plans. Instead there is an attempt to differentiate between various groups in the active population according to educational levels or the number of years it will be necessary to consecrate to study; in this way production objectives can be interpreted as manpower objectives and finally as education objectives. If one establishes a projection of future needs it is clear that this must be balanced by manpower supply, that is to say, by the forecasted development of the education system which, taken as a whole, determines the number of workers at different educational levels who will be trained during the period in question even if one leaves out the question of changing the system.

The forecasting problem is no longer a technical one but a qualitative one; a compromise which has to be worked out between, for example, one's ideas of what the ideal situation would be in, say, 1975 and, on the other hand, what it is realistically possible to achieve between now and then. It is this aspect which leads to consideration of the whole problem of educational reform, and it is this kind of projection that must now be made.

The educational system of a country is one of the most important of its economic sectors, not only because expenditure on education generally amounts to something between 15 and 20 per cent. of the national budget, but also because it is the biggest consumer of qualified manpower needed for the provision of teaching staff. But, in spite of its significance and its costliness, education is also one of the sectors in which improvement in terms of productivity and efficiency have been very weak and in which there is considerable resistance to new techniques and progress generally. This can be explained by the fact that since the beginnings of civilisation and to the present day education has been seen as essentially a means of transmitting a certain heritage of knowledge and moral values from one generation to the next; and it is naturally therefore understandable that the system should tend towards conservatism. Besides, education has no price and is not sold on the market so that there has been no pressure to reduce costs or to apply methods for increasing efficiency as has been done in other sectors of the economy.

The result of this is that there are numerous difficulties involved in attempts to change the educational system. An attempt is now being made to solve these and for the first time in the history of man education is seen no longer solely with the aim of transmitting a certain common heritage from one generation to another. We have reached a stage in history where the accumulated knowledge of mankind is itself renewed and transformed within the space of a generation, and our task is therefore to train and prepare people for a world which we ourselves do not yet know.

The problem of the direction that educational reforms should take is an important one for all countries. The basic principle is that the specialised training which is necessary for the individual in the modern world should be completed by general instruction; it is widely recognised that a firm basis of general education is one of the pre-conditions of specialisation since it fits the worker for the promotional possibilities that he will encounter in professional life as well as for subsequent improvements in his basic qualifications. It is also necessary in order to facilitate the necessary re-adaptation, which economic change may give rise to. As a result any educational reform must allow for this need for flexibility and the possibility of preparing each worker for his personal adaptation to the changing world.

This implies first of all a reform of the structure of the educational system and there is an increasing tendency to unite branches of teaching which were traditionally separated; for instance technical instruction and general teaching now tend to be given in the same schools or universities, or in any case there is a tendency towards a more general acceptance of the equivalence of studies in different branches in order to enable a student to change his field of study during his scholastic career. Another structural reform lies in the opening up of the educational system at all levels to adult workers since education is now considered as a permanent long-term process.

Secondly, reforms in the system generally have the affect of narrowing the gap between school and everyday life this is evident in countries as widely different as the United States and the Soviet Union. Also there is a tendency to re-introduce technical training into general teaching and to foresee a new form of modern humanism which reconciles and brings together the traditional branches of "arts" and "science". We try to avoid the lack of knowledge that hitherto made the liberal arts student feel uncomfortable in a scientific and technical world while on the other hand resulted in scientists and technicians knowing very little of the general social problems of the world in which they lived.

All this is naturally easy to say but in practice such a large-scale reform has never yet entirely been carried out in any single country.

Finally, there is a need to reform the methods of teaching with greater use of the more active methods including audio-visual aids and radio and television, the applications of which have been until now little studied except in so far as professional training is concerned. As for the rest of the system the enormous technical means which are today at our disposal have hardly even been considered as useful aids to the teaching staff and as a means of saving teachers' time.

All these reforms of structures, programmes and methods have but one object: to train people for an active participation in development. Until the present day most economic theories have been equilibrium theories. The aim was to achieve a certain balance, and economic policy was largely devoted to re-establishing this balance when it was upset by crises or similar phenomena.

After the first and the second World Wars there was a general tendency to try to recreate pre-war conditions and it was not immediately realised that a new and entirely different phase had been entered. Nowadays economic theory is much more concerned with growth than with balance, but if one looks at things in terms of manpower the same problems are evident and it must be realised that our present educational systems are not all in tune with the needs of a developing world.

We do not know, for instance, what kind of training should be given to an official in order to better prepare him for an active rôle in the development of his country. What we do know is that certain present day policies must be abandoned: policies which in industrial countries have resulted in the mentality which sees the main task of the official to be that of defending his own interests against those of his colleagues in other ministries and exercising a power to prevent action being taken rather than contributing to such action.

Again in agriculture the correct methods of training agricultural engineers and specialists is well-known, but what is known of the best ways in which to train village "activistes" or the agents of community development projects as animators capable of introducing new techniques and progress generally into the traditional agricultural sector? In any case the prestige of the educational systems of industrial countries must be re-examined. These systems were exported by colonial powers during the nineteenth and twentieth centuries and have been adopted by developing, and now independent, countries who have maintained the largely justified respect for these foreign educational systems. The problem is a difficult one - more harm can be done by introducing poorly studied reforms than in continuing the present system even if it is too expensive and often badly suited to the needs of the country in question. For example, certain countries which have tried to change completely the European type of educational system that they have, have found that the result is a catastrophic fall in the level of studies. I do not wish in any way to make the problem appear simple but only to underline the great need there is for further study.

In conclusion, I hope that I have shown that the problems of long-term projection are not only technical but imply a policy of development of human resources which must be a principal object of national policy not relegated to study by a single ministry or left to technicians.

It has been said that war is far too serious a matter to be left to soldiers, and one might also say that the problems of education are too serious to be left in the hands of teachers and specialists.

(This lecture was delivered originally in French)

THE ELEMENTS OF HUMAN RESOURCE DEVELOPMENT PLANNING AND THE INTEGRATION OF MANPOWER PLANNING WITH GENERAL ECONOMIC DEVELOPMENT PROGRAMMING

by F.H. Harbison

The subject of this very short exposé is manpower development policy as related to economic, social and political growth. This is a very broad subject and I would like only to make a few simple points to be used as a basis for discussion.

If you really want to make a distinction between the advanced countries and the so-called underdeveloped countries, I would argue that national income per capita is, perhaps, not the very best indicator that you can choose. A set of indicators which show human resource development is, perhaps, a better indicator of stages of economic development than national income per capita, although frankly in making this distinction I would use both, and many other measures as well. But my first point is that the wealth of a nation is primarily in its population and it can be measured by the skills, the aptitude and the knowledge which is stored in its people. The sum total of skills, aptitudes, and knowledge of people all are described as human capital, and I am going to spend some time discussing human capital, the processes of human capital, and the relationship between the rate of accumulation of strategic human capital and rates of economic growth.

First, let me make a simple definition of what I call strategic human capital. Strategic human capital is high-level manpower including all top administrators in both public and private enterprises, engineers, scientists, agronomists, doctors, university professors, secondary school teachers, and so on. But my definition would also include sub-technical personnel, and sub-professional personnel, such as nurses, agricultural assistants, engineering assistants, senior foremen, supervisors, primary school teachers, etc. This definition includes most of the people who are critical in the development of a country. Let us somewhat arbitrarily say, then, that the strategic human capital of a country consists of all those persons who have a secondary education or its equivalent in experience. Now, I would like to give you a few statistics. Always beware of statistics because often they obscure the facts! But nevertheless we will use some statistics.

I will start off with the Federation of Nigeria where, as nearly as we can count the situation, there is one person out of every thousand of the population which is in this high-level manpower category, - of which one half represent ex-patriate personnel not indigenous personnel. In the United States of America the figure is 288 per 1,000 which is quite a significant difference. If we had statistics and the time, we could put all the countries of the world on a scale running from 288 per thousand, which is the top to one-tenth of one person per thousand, which is the bottom of the scale. Incidentally, Nigeria, by comparative standards, is a fairly well developed country.

If we take national income per capita we find roughly 100 dollars national income per capita for Nigéria and 2,800 dollars national income per capita for the United States. So we see that in the United States where the stock of high-level manpower is 288 times that of Nigeria, national income per capita is 28 times as great. In other words, the difference is 10 times greater in the manpower index than in the national income per capita index. These are very rough figures (to do the calculation properly many adjustments would have to be made), but there is one basic principle that can be drawn from them: the rate of accumulation of high-level manpower in a developing country always must exceed its rate of economic growth. For example, for the newly developing countries in Africa, one should aim at a 3:1 high-level manpower/output ratio. In other words, if the national income of Nigeria is to grow at a rate of 3 or 5 per cent. per year, then I would argue that its rate of accumulation of high-level manpower must probably be in the order of 15 per cent. per year. Besides, to the extent that you have a replacement factor, - that is the need to replace the ex-patriate personnel with local national personnel - you may have to increase the rate. Also it should be noted that the necessary rates of accumulation of high-level manpower differ from one occupational group to another. A recent survey in Uganda, Kenya, and Tanganyika shows that the rate of accumulation of persons with university training will have to be about two to two-and-a-half times the rate of economic growth, while sub-technical personnel (the technician group, the intermediate category of high-level manpower), will have to grow in a ratio of about 3:1. At the same time it is estimated that total employment will grow at less than half of the rate of national income per capita. In a similar way every country which is faced with the problem of planning for accelerated economic, political and social development, needs to have a strategy, a broad plan, for integrating the various programmes which contribute to human capital formation or the formation of strategic skills.

The processes of accumulating high-level manpower or strategic capital formation are almost blindingly obvious. In the first instance you have investment in formal education which involves finding the appropriate balance between investments in secondary and higher as related to primary education, and also the balance between so-called technical education, and so-called academic education.

Another process of human capital formation, almost as important as the educational system itself, is the process of training persons who are already employed. This means training on-the-job, through organised educational programmes which are related to the job. The development of people, the building of brainpower, is not exclusively a matter of the educational system, but a process which continues through the periods of employment. Human capital, - skills and knowledge, - are accumulated while people are working, and, of course, you can devise all kinds of policies to increase and to stimulate human capital formation through this process of training in employment. A third way in which you can increase human capital is a more nebulous one but equally important, and that is by building and managing efficient organisations, whether they be government ministries, private enterprises, quasi-government business or whatever. By applying better management throughout public and private life you can greatly increase the productivity and the effectiveness of your manpower resources. Human capital is formed and stimulated by good organisation, efficient administration and so on.

It is characteristic of the newly developing countries that in the short-run (and I use the term "short-run" to mean a period of ten years or less) it is virtually impossible for them to accumulate all of the high-level manpower needed to carry out their development programmes; that is to do this job themselves. So, just as newly developing countries have to import capital from abroad, they also have to import high-level manpower from abroad. Those countries which are rapidly replacing the former colonial civil servants not only have to export high-level manpower, but to import it as well. Therefore, there is a concept known as the balance of trade of high level manpower which also results in certain balances of payment. How can a newly developing country import high-level manpower? Latin American countries, by-and-large, particularly Argentina, Chile and Brazil have imported high-level manpower by encouraging immigration of quite highly skilled people from Europe. You will find as you visit factories and plants in these areas that a number of the top-level managerial people are engineers or former entrepreneurs in some European country. Another way in which human capital comes into a country is when a foreign firm, let us say an oil company, decides to develop oil resources. Under this situation the foreign company brings in both capital and high-level manpower in the form of technicians and engineers. But today, of course, the most popular and widespread means of importing human capital is through technical assistance. A country asks the United Nations or individual advanced countries to send technicians to help them set-up schools, or new programmes of agricultural extension, to help with the development of industry, with economic planning, etc. Indeed, today there is a great deal of competition among the givers of technical assistance; sometimes the expert advisors outnumber the people who are supposed to do the job in the country. It is very important for newly developing countries to have a clear policy for importing human skills. The first thing the policy should have is some central co-ordinating point to make sure who is being invited and why. Secondly, any foreigners coming into a country should be brought in, in my judgment, not to do a job but primarily to train the local nationals how to do a job. In other words, the imported manpower should act as seed corn for the development of local national resources. Otherwise the country may get into the dangerous political situation of having foreigners, in effect, dominating the course of economic life.

The processes of human capital formation, therefore, are investment in formal education, development of programmes for training of those already employed, the building of effective employing organisations, both public and private, and the import of necessary human capital to meet short-term needs. One more ingredient may be added. Human capital is not just like material capital, each unit has a soul and a will of its own. Therefore, any strategy of human capital formation of necessity involves the analysis of the problems of incentives. Somehow or other you have got to give people the will to work, either force them into the right activities or provide the kinds of incentives which evoke their voluntary participation in those activities which are designed to promote economic, social and political development.

There are many difficult problems connected with this question in newly developing countries. In Kenya for example, the rapid replacement of British civil servants by the very few Kenyans qualified to take these positions has brought about a tremendous inequity in wages between the Africans wno get these high positions, based on the former ex-patriate pay scale, and the rest of the country. Besides, sometimes the people who hold these positions do not really have the education and the necessary qualifications. Ten years hence young, well-educated Africans will be coming in and wanting jobs in the civil service, only to find that they are already filled by people who got in early but who had less qualifications.

Another example might be given in the field of public health. When a man becomes a doctor he wants to stay in the city, after all, that is why he becomes a doctor. On the other hand, the problems of public health are in the bush. Really, a country needs many more medical technicians and nurses in the bush than doctors in the basic urban areas. If you are going to develop medical technicians and have people go out into the bush you may have to pay them almost as much, if not more, than the doctor who continues the easy life in the city. Do you raise the wages of medical technicians or do you lower the wages of doctors?

These examples given an idea of the range of problems. Fundamentally, newly developing countries are going to be faced, over the next ten years, with a really difficult problem of wage and salary structure. Primarily because they have inherited a wage and salary structure from colonial times which is wholly inconsistent with the needs of the developing country. We talk today about the tribalism and traditionalism of societies and explain lack of progress in development by the difficulty of changing traditional ways. I would say that there is nothing more traditional, nothing more reactionary and resistent to change and progress than governments, many of which have been modelled on colonial régimes and which have been taken over by the Africans. The need is for great flexibility in planning of manpower programmes, and I would say that in most countries there is also a need for a drastic reform of wage and salary structures in both the private and the public sectors, in order to develop a strategy of high level manpower formation.

Basically the manpower problems of newly developing countries fall into two general categories. The first we have already discussed in superficial terms, - the shortages of skill and some of the processes for increasing high-level manpower or brainpower as it ought to be called. But there are other equally difficult manpower problems in newly developing societies, and they are the problems of surpluses of manpower, of redundant labour, of underemployment, of disguised unemployment, of partial unemployment, etc. Unfortunately, even countries that are developing rapidly seem to have these twin diseases at the same time. The disease of shortage of critical skills and disease of rising and mounting unemployment. For example, the Government of India in its third Five-Year Plan estimates that even if this plan is fulfilled - and it is an ambitious one - there will be more people unemployed at the end of the five year period than at the beginning. The very ambitious development plan of Egypt which shows an even more rapid rate of increase than the Indian plan, will result in making no dent whatsoever on the unemployment problem, merely because more people will be entering the labour force each year than can be absorbed even by a rapid industrialisation.

Now what are the reasons for this? First, many countries are bent on industrialisation and when they industrialise they do so with relatively modern methods. An industry really does not employ very many people, and once industries get started their consumption of labour tends to diminish rather than to increase. This Indian example is typical. In 1950 there were about 300,000 people in the jute mills, but by 1960 although the production of jute had increased the employment figure had dropped to almost 200.000. Again, in Egypt textile production today is three times the production of 1953 but the labour force is if anything smaller than it was at that time.

If industrialisation itself absorbs very few people, one can only hope that the unemployed be soaked up in petty trade, services and that kind of thing. But this will not happen unless there is a general increase in the national income, and in most of these countries the only way to have a substantial increase in national income is to have an increase in agricultural production because, although industrialisation may be necessary, you cannot industrialise without at the same time developing agriculture both for home consumption and for export. This leads me to be even more pessimistic. Many countries have unemployment resulting from rapid modernisation, and particularly in the African countries, the spread of universal primary education to the rural areas has resulted in a flight from the land, and a flow of manpower to the cities to find jobs in government or in industry. But, as I have indicated, the jobs in industry, even given a fantastically high rate of growth, are not going to soak up all of these people and the government can take on only a limited number of porters, coffee bearers, minor clerks, etc. In Ghana and Nigeria the problem of the unemployed school leaver has already reached very great proportions, although one could not say that either of these countries today are overpopulated.

One answer to this is to make production processes more labour-intensive, although some countries try to do this by forcing an employer to hire more people than he really needs. This is what is called stock piling surplus labour within the plant gates; it really does not work because it interferes with efficiency. The second answer is to extend handicraft industries and use labour intensive and capital saving types of industrial development; but virtually no country today is willing to forego the use of modern industrial techniques which have taken the advanced countries a hundred years to develop. It is possible to adopt labour-intensive methods in construction, and in certain other types of industry, but when it comes to steel mills, or cement plants or factories even textile mills, it is probably suicidal for a country to use archaic methods of production, particularly if it hopes to develop a manufacturing system which can export goods in competitive foreign markets. So, unfortunately, we come back to the problem of finding ways of holding this labour surplus on the land and in the rural areas. At this point people throw up their hands and say "there are too many people on the land already, we cannot store them there and furthermore they will not be stored". It seems to me that the only solution, or partial solution, is an agricultural or rural revolution. Newly developing countries need the rural revolution, in my judgement, more than they need the industrial revolution.

I mean by this an improvement in the production and productivity of agriculture, an increase in the volume and particularly the quality of export crops and, above all, a development of agriculture to the point where a country can feed itself. Many newly developing countries today have over 70 per cent. of their active population engaged in agriculture and still are importing food. But if more efficient methods of agriculture are used to increase production, fewer people will be required in agriculture

to carry on these activities. On the other hand, with increased agricultural productivity it should also be possible to completely rebuild rural villages, to build schools, to build general civic and social centres, to build sewage systems, to build roads, access lines and all of this kind of thing. You can have capital formation by making out of tawdry, dirty and smelly rural communities, modern rural cities. And this can be done fairly easily by applying the local surplus labour to the development and building of a completely new type of rural community.

I suppose this is behind the thinking of the Indian community development plan, and other similar projects, but in the modern age of industrial development there is also a tendency to build symbols of grandeur rather than real development projects. For example, a newly developing country in order to be in a class to be noticed must have a dam, and a big dam too, not just a series of small dams. A steel mill is almost essential too, even if there is no iron ore or coal, because you are nobody without one. Again, an international airline which looses money is almost an essential. All the airlines of newly developing countries loose money (except one that I know of that makes money because it owns the choicest real estate in the capital city; - it makes money on the ground only to loose it in the air). Nigeria, today, has not one but three television stations and more are on the way. Also, a really impressive university with the latest and most expensive modern architecture and a very high teacher:student ratio is another of these prestige necessities. It costs roughly three times as much to educate a man to university level at the University College of Ghana as it does to send him to Oxford, Cambridge or the University of London.

In time these factors will change, and I am not saying that these investments should not be made but I do want to conclude my remarks by stating that prestige investments of this kind; including large factories, and industrialisation built up behind high tariff walls, are not the whole answer to the development problem. I submit again, in conclusion, that a major part of this answer is a revolution of rural life and the concentration of resources, and energy and imagination in this direction. I think that newly developing countries that have some symbols of grandeur in terms of really modern rural communities built up by local labour-intensive methods may be the leaders in the march towards industrialism and economic progress.

(This lecture was delivered originally in English)

POPULATION PRESSURE AND EMPLOYMENT OPPORTUNITIES

by G. Etienne

As the title shows there are two distinct parts to this lecture. First of all I will mention briefly some of the principle characteristics of the problem of population pressure. Then, in the second part, I will examine the relationship between this population pressure and certain economic problems, - particularly that of employment.

It is sometimes thought that population pressure in developing countries is due to a naturally high fecundity which leads, in comparison with our standards, to an equivalently high birthrate. I think that this idea is wrong and to illustrate why I would like to quote a few figures. Between 1600 and 1649 married couples in the City of Geneva had an average of 9.4 children; in Canada in the first part of the 18th Century the average per couple was 10.8; and again in Norway in 1874-1876 (not very long ago) the average number of children per family was 8.1, whereas today the equivalent average in India, for example, is roughly six or seven. One can conclude, then, that it is not a question of exaggerated fertility.

Again, it is often said that a fall in the birth-rate is due to the indirect consequences of an increase in income per head. But it is perhaps useful to remind ourselves that in many European countries there was a considerable time-lag between the beginning of economic expansion and the point at which the birth-rate began to fall. In 19th Century Germany production per head multiplied five times before the birth-rate showed any noticeable decline. Great Britain, for instance, saw a fall in the birth-rate only around the year 1865 whereas economic expansion had already been taking place for several decades. I am inclined to say, therefore, that the influence of income on the birth-rate is a factor which comes into play only after a long delay.

If we turn to the problems of African and Asian countries I think that we can distinguish several different cycles or phases in the population question. We start with a situation in which both mortality and the birth-rate are very high thus establishing a sort of natural equilibrium frequently limiting the increase in the population to less than 1 per cent. This kind of situation, which existed during the pre-colonial period, changed rapidly. In the countries that were colonised by Europe there was a slow fall in the death-rate accompanied by an increase in the birth-rate. This is the first phase.

Then, in the second phase, there is a rapid fall in the death-rate while the birth-rate remains constant. In the third phase there is a continued slow fall in the death-rate, perhaps accompanied by a fall in the birth-rate, and the fourth phase a new equilibrium is found between the death-rate and the birth-rate. Today we can find in underdeveloped countries either the second or the first phase. There are as yet no examples of the final phase of a return to equilibrium.

India of ten years ago will serve as an example of a country going through the first phase. The 1951 census shows a death-rate of approximately 30 per thousand and a birth-rate of approximately 43 per thousand with infant mortality at something between 200 and 250 per thousand, resulting in an annual growth of the population of approximately 1.3 per cent., - therefore very slow. Already at that time, however, - only little more than ten years ago - this situation was relatively rare. Most Asian countries were already experiencing phase 2. On the other hand, the phase 1 situation still exists today in several African countries.

Let us now turn to phase 2 which I consider the most important since in a few years many countries will see a doubling of their annual rate of population growth simply through a rapid fall in the death-rate. This will have tremendous economic repercussions which we will examine later. In order to make clear what I mean, I would like to give you a classic illustration of an extraordinarily rapid fall in the death rate. In 1946 Ceylon had a death rate of 20.3 per thousand, and already at that time had relatively high public health standards. However, one year later the death rate had fallen to 14 per thousand and in 1949 there was a further fall of 2 per thousand.

This new and revolutionary phenomenon is due to the advances in hygiene and medicine which came about mainly during the Second World War and which have resulted in the ability dramatically to reduce the death rate without any appreciable improvement in economic standards. Anti-malaria campaigns using DDT cost less than one dollar per head whereas between 2,000 and 10,000 dollars is needed to create a new job opportunity in industry. This phenomenon, which Europe did not experience in its period of development, is certainly a source of complications for the developing countries. Progress in public health in Ceylon resulted in a fall in the death rate in three years which it took France 40 years to achieve (1880-1920).

Several other countries in Asia and Africa have death-rates of between 20 and 15 per thousand, particularly in North Africa and the Middle East. It is also worth noting that in a decade India has also entered this category of rapid population expansion. The 1961 census showed an annual population increase of approximately 2.2 per cent.

It is also probable that certain African countries are also going through this stage. Population forecasts for Ghana estimated 5.5 million in 1960, whereas the census returns show 6.7 million. Once this rapid fall in the death rate again slows down, progress becomes much less evident. This progress or rapid fall is due to the eradication of widespread illnesses and epidemics by large-scale remedies involving antibiotics, DDT., anti-tuberculosis vacines, etc., but as soon as improvement in public health no longer depends on these cheap remedies, but instead on hospitals, doctors, chemists, nurses, etc., the cost of these amenities slows down progress. We see, then, that after a very rapid fall in the death-rate a country moves into phase 3 where the birth-rate stays more or less constant.

Let us now examine this problem of the birth-rate. In most underdeveloped countries today the birth-rate is roughly between 40 and 50 per thousand. While, as I said earlier, fecundity is not necessarily greater in these countries than it is in Europe, the rate of marriage is higher due largely to the quite widespread practice of marrying young.

Up to the present it has been difficult to find any signs of an appreciable fall in the birth-rate. This fall may be brought about through indirect factors which do not involve massive family planning propaganda or the artificial limitation of births. It is sometimes said that urbanisation results in modernisation of thought which can lead to more or less spontaneous adoption of contraceptive practices. This is both true and untrue - perhaps I can explain myself by an example. In Bangalore it has been found that the average number of children per couple in the town is 5.3 whereas the average for the surrounding countryside is 4.8 - a fact which is attributable to the more favourable public health conditions in the city itself. There is also the possibility of raising the legal minimum age for marriage. But it is hard to estimate what practical effects this might have, since for instance in India, even the present minimum ages (14 for women and 18 for men) are not always respected.

Again, it is said that an improvement in living standards often spontaneously leads to a fall in the birth rate. As proof of this we are told that the higher income groups of Asia and Africa today frequently have an average of only two or three children per couple. It is a fact that in modern surroundings even in underdeveloped countries, big families are a thing of the past. However, I do not think that it is valid to generalise this argument. In the first place, as we have seen as concerns Europe, this process takes a very long time, while the point is that it is especially important that the birth-rate be very considerably reduced during the take-off stage. If we consider countries that have a longish history of industrial expansion we cannot find any natural fall in the birth-rate. Brazil, whose economic development dates from before the Second World War, and Mexico as well as Turkey, all show that, in spite of undeniable economic progress over a period of 15 or 20 years, there is no appreciable fall in the birth-rate. Not only is there little chance of the birth-rate falling substantially in the near future, but there is the risk that it may increase. Health progress affects not only the death-rate but also the birth-rate, and it has been found that the eradication of rickets increases the fertility of married couples. Also, by lowering the death-rate among women you increase the number of women capable of having children.

It is not always recognised that modernisation is a double-edged weapon; many traditions which are done away with had, in former times, a limiting affect upon the birth-rate, for instance, the custom according to which widows belonging to the higher Indian castes were not allowed to re-marry, or the sexual taboos which are still to be found in Hindu and Muslem communities and in certain African civilisations. I do not want to exaggerate the importance of these aspects but nevertheless they should be borne in mind.

One concludes that without direct family planning propaganda there is little chance that the birth-rate will fall substantially in the next 10 or 20 years. This leads us to the question of the use of family planning methods, - a subject which should be discussed objectively. First, it should be noted that the problem of population pressure is by no means the same everywhere - there are some cases of obvious over-population as in several Asian countries and along the Mediterranean coasts, but you have also cases of under-population in many areas of Africa and South America. Therefore, when speaking about the population problem, a distinction should be made on the basis of the relationship between population and resources which will show us that the problem is of different proportions and involves different complications according to the area that one is dealing with. There are even many countries which could support a far higher population than they have today while, at the same time, there are countries where the population-resources ratio poses very grave problems. This is true of Algeria, Egypt, the Lebanon, East Pakistan, India, Java, Indonesia, and China, to give only a few examples.

What is the situation as far as voluntary birth control is concerned? Generally there is agreement nowadays that this is a very long-term remedy. Certain countries have carried out quite large-scale experiments such as, for instance, India[1] which has had a clear family planning policy over the last ten years. These experiments have shown that in general people are not as hostile to the idea of birth control as was imagined. Neither Hinduism nor Mohammedanism are opposed to birth control. On the other hand, there are some traditions of these religions which favour large families and are, therefore, indirectly opposed to restrictions. Nevertheless, in many cases there have been relatively favourable reactions even on the part of extremely primitive peoples. I do not have time to enter into details here, I would just point-out however that the practical difficulties involved in the dissemination of contraceptive methods are much more complicated than certain neo-Malthusians assume. There is the question of the cost of products, of stocking and distribution and instruction into the methods involved.

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[1] Also Mainland China and to a lesser degree Pakistan and Egypt.

All this does not mean that one should abandon consideration of this method simply because it is a long-term one.

If we turn to migration I think we can agree that this is a remedy as far as over population of small territorial units is concerned: units such as Porto Rico, Mauritius, etc., but I do not think that one can go much further than that. In many countries the population pressure is so great that it would need large-scale migration of five, ten, fifteen or even fifty million people to solve the problem. This is obviously impossible from a political point-of-view and far too expensive from an economic one. Finally, the psychological factor is an important one. There do exist populations that have a migratory tradition such as the Lebanese, the Syrians, and certain Indian and Chinese communities. But there are others who do not have these traditions. When Egypt and Syria were joined together as the United Arab Republic the question of transferring some of the excess Egyptian population to Syria was discussed. This on paper is both a rational and a logical idea, however, it is perfectly impracticable for political reasons, and also for the simple reason that Egyptians had not the slightest wish to move themselves and their families into a country which they did not know. One even has problems within certain countries as far as migration is concerned. I think, then, that these attempts do not really achieve very much. We are left facing the fact that whether we wish it or not, whether we engage in birth control campaigns or not, population pressure will continue to grow in most of today's underdeveloped countries at precisely the time when all our energies should be mobilised to further economic development.

If we turn now to the employment problems connected with population pressure I think that it will be seen right away that the most immediate and usually the most serious repercussions of the population situation are to be found on the labour market.

I would like, therefore, to take a few concrete examples of large countries in which this problem is of capital importance: particularly China and India. In 1953 Mainland China had a population of 582 million people with a birth-rate of 37 per thousand, and a death-rate of 17 per thousand which gave an annual growth in the population of nearly 2 per cent, which by now has quite likely risen to something like 2.5 per cent. China at this time was already in a phase of rapid population expansion, with an annual increase of something in the order of 12 to 15 million people. The first Chinese five-year plan shows an intensive effort to mobilise energy and resources, which hardly has an equivalent in other Asian or African countries. This State plan created 5,360,000 employment openings of which nearly 3 million were in industry. Besides, there were various other projects on which statistics are not available. Large sections of the rural population were mobilised, often by very vigorous means, to carry out agricultural projects and certain migrations were carried out to increase the population of Manchuria, the Sin-Kiang area and Tibet; - migrations involving millions of people. But it is questionable whether the first Chinese five-year plan resulted in the creation of the 17-20 million new employment openings which the population increase called for, quite apart from finding an unknown number of job openings - but doubtless a high one - for all the unemployed and underemployed. It is clear, in any case, that the problem of employment and underemployment has not been solved in spite of the extreme effort and the great sacrifices that the Chinese people have made. In 1954 and 1955 Chinese newspapers were full of references about mass movements of people "coming to the towns in order to seek work and being sent back to the countryside because no work was available". By 1958, when what is known as "the great step forward" was undertaken, there was talk of movements of something like five million townsfolk to the countryside. This gives us an idea of the situation. It is characteristic of this first Chinese plan that, in spite of the high priority given to industry, and especially heavy industry, the problem of unemployment could not be solved.

It has been very difficult to follow the development of Chinese economy since 1958 because of the frugality and finally the almost total absence of statistics. It is clear that considerable efforts were made to create employment openings, and I think that the revision of Chinese economic policy after 1957 is in part the result of this employment problem. The mass mobilisation of peoples was one attempt among others to solve this question. There has been talk of 15-20 million people engaged in small irrigation projects, and of 50 million people producing iron and steel by means of the well-known "backyard furnaces". It is noteworthy that in spite of these efforts the problem of unemployment in China is still not solved today. The report of the April 1962 parliamentary session showed that today, in the same way as six or seven years ago, Chinese authorities are complaining about the movement to the cities and that extremely severe measures are taken to oblige people to return to the countryside. If I have emphasised the case of China it is because we can see in this example an extremely formidable and serious effort, involving great sacrifices, which, however, has not provided the answer to the problem.

India with a population of 361 million in 1951 and 438 million in 1961, is another country that has made a co-ordinated and concerted effort to follow a clear policy of development - the effort has been sustained, regular and increasing, and it is therefore particularly interesting once again to study the question of unemployment. At the end of the first five-year plan India had a total of approximately 5 million totally unemployed; at the end of the second five-year plan there were approximately 9 million totally unemployed. The number practically doubled in spite of the fact that the second five-year plan created 8 million new job openings of which 6,500,000 were in sectors other than agriculture. As for underemployment, this involves at least 15-20 million people. The investment estimates for the third five-year plan are double those of the second five-year plan which accounted for something like 25 billion American dollars. The third plan will, in the best of circumstances, create 14 million new job openings of which ten and a half million will be in extra agricultural sectors, while at the same time population pressure will result in 17 million new people entering the labour force. So in spite of considerable effort the Indian plan will not provide even enough jobs for those entering the market, quite apart from the problem of absorbing the backlog of unemployed.

One might say that these are examples of very large countries. But they also relate to countries which, in different political contexts, have made very substantial efforts for development over a considerable period.

We should now examine rather more closely this question of employment in relation to the industrial and agricultural sectors. This is a question which is hotly debated at the moment. Should one give priority to agricultural development or to industrial development? Personally I would rather avoid making a choice between either one or the other. I think that what is necessary is the striking of a judicious balance between the two. It is clear that the question is related to the over-all problem of development and that industrialisation alone will not alleviate rural over-population. I do not think that industrialisation and the development projects related to industrialisation can achieve more than the absorption of newcomers. This means that the relative density of the rural population can be reduced by industrialisation but that, on the other hand, it is very unlikely that the absolute number of people in agricultural employment will be affected. The problem is particularly serious in countries which have a high rural density such as Java, India, Mainland China, East Pakistan, Egypt and Algeria. The example of Japan will show what I mean. During the period of heavy industrialisation from 1920 to 1940 the rural population of Japan remained constant in absolute figures and the enormous industrial effort only succeeded in absorbing the surplus population coming on to the market.

It is dangerous to be over-impressed by the myth of industrialisation; although obviously indispensible, it is not the whole answer to the problem of population pressure. A further element should be considered and that is that modern industrial techniques which are employed in Africa and Asia have been developed in industrialised countries where there is a shortage of manpower and, therefore, they have a tendency to be capital-intensive. The cost in fixed capital is high, the need is for skilled technicians and they provide only few job opportunities. However, it would be very difficult to alter this, since it seems unlikely that African or Asian countries would agree to adopt industrial techniques dating from the 1920's which are more labour-intensive, and, in any case, the goods produced would then no longer be competitive with those produced by modern industries.

Perhaps, though, a partial solution might be found if one turns to the agricultural sector where it would seem there are still considerable employment possibilities. Productivity in Asian and African countries today is still extremely low, frequently due to poor soil and other factors which I will come back to in a moment. While it is doubtful whether these countries could achieve a productivity equivalent to that in France or in Holland, nevertheless very substantial improvements could be made (in the nature of 30, 50 or even 100 per cent productivity increases). Studies by the I.L.O., the F.A.O. and various other organisations have shown that considerable and rapid improvements in agricultural productivity are perfectly possible under certain conditions. Some projects, for instance, do not require dozens of experts or specialists in agricultural problems and a large supply of tractors and so on, but require a large and industrious body of farm workers which is obviously available in these countries. Usually such projects are for land levelling, irrigation, drainage and simple improvements in techniques (the use of steel ploughs, the improvement of certain tools, better kinds of seed grain, etc.). The country which has made the most experiments in this kind of project is again the People's Republic of China although the danger in discussing Chinese experiments is that while in certain respects, their technical and economic principles are of great interest to most underdeveloped countries, the application of these principles has been completely distorted by political excesses.

The mass mobilisation method and the development of labour intensive projects is beginning to spread. In India, notably, there is an increasing consciousness of the need to provide work of this kind in agriculture. Clearly this is not due to the influence of Chinese methods, but simply the application of similar solutions to related problems. In Africa too, consideration is being given to methods of 'human investment', and if experience in this field is at the moment limited it is nevertheless worth examining.

Labour intensive agricultural projects do, I think, provide one answer to our problem of population pressure, but it is nevertheless necessary, in order to carry these out, that certain conditions are fulfilled. The population involved must be a willing partner in development efforts, which is as much as to say that agricultural reform, where this is necessary, should be carried out. It is clear, for example, that the system of métayage will never stimulate the farmer to greater efforts if half or more of the accruing profits will go into somebody else's pocket. Therefore, agricultural reform is needed of the kind which goes further than a simple re-allocation of land and which is concerned with the problems of the systems of farming and rural economics. Africa is perhaps lucky in the sense that, apart from a few exceptions, systems of land ownership are generally much more straightforward than in Asia. Property is usually collectively owned by the clan or tribe.

Finally, there is a need too for men who have the courage and determination and training to lead in this kind of work. Here we have a problem which is both political and technical.

Solutions can be found in this direction although obviously this is only one sector for development and industrial projects, the construction of dams, and other construction work should not be neglected. But one should try to stimulate these more or less classic methods of economic development through a more intensive mobilisation of human resources. It is no less evident that the political context in which this is carried out will vary from one country to another. Certain projects in Senegal have been strikingly successful as far as rural construction is concerned, without any use of restrictions or obligation. Thus a method which we have looked at from the point-of-view of employment is also considered a valuable source of capital formation. The two aspects go together. Indeed, in considering the financial development of many countries, I think that one can conclude that classic methods of financing will not be sufficient to meet the needs which are in part stimulated by population pressure. If the necessary capital either provided locally or coming from abroad is not in sufficient quantity this seems to be one more reason why one should use intensively the labour element.

This, while it is a logical conclusion, does not gainsay the necessity to consider other elements which are less easily measurable. First of all, we must recognise that the importance of the problem of population pressure is often not clearly understood by industrial and political leaders in Europe and in other countries overseas. Secondly,

there is a whole series of socio-political and psychological aspects which often hinder the immediate application of such development schemes. This results in a considerable slowing-down of the process and sometimes there is much criticism about this delay, but this time element is inescapable. All industrialised or "developed" countries (Japan, the United States, Soviet Union, not to speak of Western Europe) achieved their present situation through efforts spread over several decades.

(This lecture was delivered originally in French)

AFRICAN EMPLOYMENT PROBLEMS AND POLICIES[1]

by A. Dawson

1. Human resources are rightly regarded, especially in those African countries that are not so well blessed as their neighbours with mineral and other great natural endowments, as the main and sometimes the only abundant productive force which can motivate their economic development. It is characteristic of African, as of other countries still in the course of economic development, that they lack real capital. Standards of living are low largely because there are too few buildings, plants and machinery, roads and railways and other physical equipment of all kinds in relation to the size of the population. Insofar as each person seeking work will need at least a minimum of equipment to do some sort of job, the lack of equipment not only holds down productivity and standards of living but also limits employment.

2. A high rate of investment - a major effort of construction of buildings, equipment and real capital of all kinds - is therefore needed in African countries in order substantially to increase both employment and standards of living, and this effort will have to be sustained over a considerable period of time. But what are the possibilities of achieving some immediate improvement? It appears at first sight a relatively simple matter to increase employment substantially, even though productivity may remain low for lack of equipment and mechanical power, by pushing ahead with as many labour-intensive projects for the construction of physical capital as possible. This is the simple and basically valid philosophy underlying programmes

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[1] This is a summary of a lecture and of a document circulated in conjunction with it. As such, it excludes the case material that was introduced in the lecture as an illustration of the points made.

of human investment and community development, civic service and labour brigades, public works and other labour mobilisation schemes which have been recently launched in Africa and which tend to differ more in name than in essence.[1] But how many labour-intensive projects are possible? What are the limitations which prevent the full employment of all those who are now unemployed or underemployed for lack of capital equipment, land and other complementary productive resources, or those who are out of a job during slack seasons or for other reasons?

The Evolution of African Employment Problems

3. The unskilled labour that is potentially available in many developing countries, in Africa and elsewhere, has been compared with the coal at the bottom of a mine - steps have to be taken to win it as something of economic value. In the traditional tribal society, when Africa was still untouched by modern life, full employment, in the sense of an absence of any desire for further work than that which had to be done, was maintained without difficulty. This was due to (i) the fact that all jobs - hunting and defence, cultivation and construction - were accomplished with only such equipment as could be made by hand in spare time, and the making of equipment filled not a little of the time that would otherwise have been unemployed; (ii) there was much work to be done precisely because of the lack of physical capital - e.g. instead of developing settled land new land had constantly to be cleared and cultivated until exhausted; (iii) growth of population, and hence the supply of labour, was held in check by high mortality rates - prior to the introduction of modern medicine and the enforcement of law and order.

4. Hence little or no African labour was voluntarily offered to meet the demand for it which first emerged outside tribal society. Africans were first taken as slaves and, after the abolition of slavery, less brutal and overt forms of compulsion were used to obtain labour for the new mines, plantations and other employment opened up in Africa for

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[1] See "Youth Employment and Vocational Training Schemes in the Developing Countries", International Labour Review, Vol. LXXXVI, No. 3, September 1962.

which the offer of wages alone constituted an unfamiliar and insufficient inducement. However, wage-earning employment, to a far greater extent than the development of cash cropping, supplied the bridge across which the modern world made its impact on African tribal life. A widening desire developed for the things which money could buy, experience of life in the modern sector brought Africans into contact with the lure of the towns and gave them both a standard of comparison by which to view tribal society with a more critical eye and an avenue of escape from that society.

5. For a considerable time, continuing to this day in some parts of Africa, the evolution of the labour force remained suspended, further progress beyond the essentially transitional phase of the migrant labour system being held up both by the unwillingness of Europeans in the modern sector to assimilate the African worker as a permanent wage-earner and full-fledged member of the urban community, and by the hold which the tribal community exerts through its power of authority over the individual and through the security and other benefits which it offers as a quid pro quo of its claims upon him. Indefinite prolongation of the migrant labour system is, at least in certain areas, economically detrimental to both the modern and the tribal sector. In the former it holds back the benefits that could be derived from a permanent, skilled and experienced labour force and in the latter it causes neglect of agriculture and other sources of livelihood. In widening areas of Africa, however, a tendency pursues its way for the modern sector to encroach continually on the tribal. While this is an essential feature of economic development, it should be recognised that unemployment and underemployment are becoming more and more serious as an essential consequence of this process.

6. The ways in which this occurs appear to be as follows:

(i) a widening desire for the things which money can buy is not matched by a commensurate increase in the opportunities for earning money, either in the tribal community or outside it;

(ii) **an increase in the size of the labour force becomes marked as a result of improvements in public health, law and order which lower mortality rates more quickly than they lower birth rates;**

(iii) **the gap between standards of living in the tribal and modern sectors broadens, as the tribal community continues to lose its most able-bodied, and notably its young, people and as more and more fully detribalised Africans, settled in the modern sector, build up experience and skills as wage-earners and as commercial farmers and business and professional men. This gap adds great force to the sociological, psychological and other factors which spur what seems in many areas to be a premature and excessive outflow of people from the tribal into the modern sector;**

(iv) **this outflow is premature and excessive, on the one hand, because the economic and social structure of tribal life has not been reorganised and developed sufficiently to permit the loss of a substantial part of its labour force without adversely affecting output; and on the other hand because the rate of investment in the modern sector has not yet been sufficiently high and long-continued to provide jobs for all those quitting the tribal for the modern sector;**

(v) **the replacement of a migrant by a stabilised labour force in the modern sector creates both an opportunity and a need for raising productivity. Permanent wage-earners acquire experience and varying degrees of skill. They also need higher wages than migrant workers, since many have relinquished their rights to a share in the property and income of their tribe and have to support their families fully from their wage-earnings. The raising of wages under the forces of the market, of minimum wage legislation and trade union pressure have given employers an added incentive not only to organise production more efficiently and use labour less wastefully, but even to make do with less labour by means of mechanisation**

and changes in technology. The level of wages, as well as insufficiency of capital, has probably played a rôle in some areas in the failure of the modern sector to provide employment opportunities equal to the inflow of people seeking or needing work.

7. Hence the main factor giving rise to unemployment and underemployment in Africa appears to be the gradual displacement of the tribal by a more modern economic and social structure in which the demand for more productive employment, including wage-paid jobs, is growing faster than the capacity of the economy to provide productive employment.[1] Major factors increasing the demand for productive employment are the spurt in population growth and above all the emergence and spread of new desires for the things that money can buy.

Different Approaches to Employment Policy

8. The scope and effectiveness of employment policies adopted in different African countries, which varies widely from time to time and place to place, is limited by the breadth and depth of comprehension of the nature and roots of the problems just outlined. The range of policies, from narrowest to broadest, could be summarised as follows:

(i) occasional relief and temporary "make-work" schemes to meet the most obvious and crying needs for more work in particular places and cases;

(ii) a systematic effort to provide shelter, sustenance, training and employment opportunities for the needy and homeless in the principal cities, including beggars and peddlers;

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[1] It is suggested that this is the main, but not the sole, cause of unemployment and underemployment. Other factors, of a more temporary and less fundamental character, can cause considerable lack of employment from time to time, such as seasonal fluctuations in production, and political instability and lack of confidence.

(iii) youth employment and vocational training schemes, such as "labour brigades";

(iv) public works to create employment;

(v) broader efforts to stem the rural exodus and to develop and expand employment in rural areas, including agrarian reform;

(vi) nationwide schemes deliberately aimed to mobilise, for employment on labour-intensive economic development projects, all manpower that is not already employed in the normal course of development at the prevailing investment rate;

(vii) public investment programmes, and policies to influence private investment, consciously designed to make maximum use, on an economically sound basis, of the labour supply (taking the skill pattern as well as the total into account);

(viii) comprehensive economic planning, embodying employment objectives which are formulated as steps on the path to full and productive employment of the growing labour force, fully cognisant of factors making for an increasing participation rate.

9. The broadest of these policies (item (viii)) is only beginning to be approached. I would like to discuss in more detail labour-intensive development schemes of the kind I have seen recently in Ghana, Guinea, Morocco and Senegal.

The Organisation of Labour-Intensive Development Projects

10. Once the limited supply of capital has been more or less widely and fully allocated to various projects, it may be that employment will be provided only for a certain proportion of the labour force. It is believed that in ordinary circumstances the remainder of the labour force can, if organised and encouraged to undertake labour-intensive projects using only simple tools and a minimum of capital and raw materials, make a net contribution to the national income. The two main problems are "to organise" and "to encourage" this contribution.

11. The task of those who are to organise and lead labour-intensive development is not easy; it is in this sphere that the main difficulties have stood in the way of making community development and "human investment" programmes a success. It is clear that the work to be undertaken should be well-chosen - it should be economically useful and likely to lead to a quick increase in output (including some increase in the supply of food and other consumer goods that the newly employed will require). It is therefore suggested that, while bureaucratic control and centralisation should be kept to a minimum and the fullest advantage should be taken of local initiative, it is desirable that criteria for the selection of projects should be laid down by an appropriate central government department or agency, which should, if possible, also provide advice to local people in the application of their criteria. The economic planning staff may also be able to select and reserve certain elements in a comprehensive development programme as suitable for labour-intensive implementation with a minimum of capital investment.

12. The group of I.L.O. experts mentioned above indicated quite a large number of ways in which fuller use may be made of surplus labour both in rural and in urban areas. Some examples of action that appear particularly relevant to African conditions and opportunities may be briefly mentioned here.

13. Much labour could usefully be expended in remedying the situation of African agriculture. The clearing of land by burning the unwanted vegetation is injurious to the soil and, if prohibited, would necessitate better yet more labour-consuming methods. Admittedly this task is heavy in many areas, but the emphasis should probably be moved from nomadism and shifting agriculture to rotation of crops, anti-erosion work (cutting of contour ditches, perhaps planted with fruit trees, reforestation, terracing, planting of windbreaks, improvement of drainage) and irrigation and river valley development. In all areas suffering seasonally or perennially from drought, much labour can be usefully employed in building minor irrigation and drainage works requiring little capital equipment, and much further employment will be created as a result, for irrigated land can be intensively farmed and seasonal unemployment reduced or eliminated. In some areas market gardening, and other forms of farming requiring a more

intensive, year-round input of labour, can be taken up, in some cases replacing imports and making use of land in the vicinity of the urban areas where important markets provide outlets for what is grown.

14. Building of roads, schools, community centres, clinics, post offices and local administrative buildings and other technically simple construction tasks generally figure largely in human investment programmes, but are more susceptible to budgetary limitations. Apart from the fact that higher wages may have to be offered to encourage people to work in this case than in the case of activities which directly serve their personal interest (such as better farming and irrigation of their own land), governments can only spend a limited amount each year on employing people in public works. One important consideration which will affect the volume of public works which they are prepared to undertake by labour-intensive methods is the productivity of labour. This can be substantially raised in many kinds of work, even without the aid of heavy equipment, by efficient organisation of work and better methods of work. The supply of specialised staff required to apply work study and to improve the management of labour-intensive public works is limited, but if it is used mainly to carry out pilot studies of types of work that are widely undertaken and common to many public works projects, the efficient methods of work which they develop can be followed by supervisory staff and labour wherever applicable. For example, the I.L.O. intends to undertake in 1962 and 1963 work studies, both in India and in selected African countries, of labour-intensive road-building with a view to determining on a pilot basis how the organisation and methods of such work may be improved - the improvements to be then widely applied. The benefits of this and other experience will be brought to the attention of a seminar on productivity and employment in public works which the I.L.O. will convene in Africa in 1963 to enable a group of officials responsible for public works in different African countries to exchange views with some experts from countries that have had longer experience in this sphere.

15. While the appropriate central agency should give as much help as possible in selecting and designing projects, and recommending efficient methods of implementation, the leadership and supervision of each project cannot be confined to remote control. But the qualities required

to lead and supervise - once the projects have been chosen and the guiding lines for their execution laid down - are not necessarily the product of long, specialised and costly training. In each local community there may be found a few people of above average intelligence, initiative and strength of character. In certain cases, they might include among their number those who have ventured out into the towns, seeking and experiencing a modern environment. One may also consider recruiting leaders and supervisors of labour-intensive development projects from among the young unemployed in the towns. They will, if wisely chosen and guided, be capable of doing a good job, but may well benefit from a few weeks orientation in a training camp prior to taking up their responsibilities.

16. Much of the work to be done on labour-intensive projects, without the help of heavy equipment and mechanical power, is arduous and back-breaking. While there may be some improvement in incomes and in consumption levels of those who take such employment, it cannot generally be much. The problem of encouraging people to undertake extra work is least when what they are asked to do serves their direct and immediate interest. In such cases people are normally prepared to work voluntarily and to plead for more materials and simple tools so that they can undertake other tasks to meet their urgent needs. But where the project serves only a more general need of the community as a whole wages will have to be paid, at a rate sufficient to encourage people to undertake the tough, energy-consuming jobs.

17. The level of wages at which people would be willing to accept such employment, and which would provide them with adequate nourishment and enable them to meet their other essential requirements, may however be less than the prevailing rate of wages. A rebate on wages may be acceptable to the community and to the workers' representatives in so far as the work done is not for private profit but for the general welfare, and because the magnitude of the task of economic development calls for every possible saving. Naturally, as has been emphasised by the I.L.O.'s African Advisory Committee this year, sacrifices are much more readily accepted by the workers, and it is indeed only fair that they should bear them, if all other sections of the community are also making a commensurate sacrifice for the sake of economic development.

18. One valuable source of support for labour-intensive projects is the surplus food stocked in some developed countries, a few of which have already shown a readiness to contribute to the developing countries on a bilateral basis. Many countries are now expected to help, on a multilateral basis, in the World Food Programme launched jointly by the United Nations and the F.A.O., which includes among its objects the support of labour-intensive projects. The aim is to provide surplus foods that are acceptable to the workers concerned as a part of the wages paid on these projects. In this way the amount of employment created can be as much as doubled. The I.L.O. is already preparing, for the attention of the Executive Director of the World Food Programme, proposals for labour-intensive projects which the Programme might support in developing countries, including those in Africa. One avenue of approach to formulating these proposals is through the pilot projects for rural employment promotion and other field inquiries and activities concerning rural employment now being launched under the I.L.O.'s Rural Development Programme.

A NOTE ON THE NATURE OF MANPOWER SHORTAGES AND SURPLUSES[1]

by F.W. Mahler

The actual extent of manpower shortages and surpluses is often not readily apparent. This is because both are made up of hidden elements as well as those that are obvious. Particularly in less developed countries, the hidden elements of the manpower shortages and surpluses are often of much greater significance than the obvious elements.

The diagram accompanying this note sets the manpower requirements alongside the labour force in order to demonstrate the nature of the imbalances that are often involved. This is of course done in a hypothetical manner and the proportions implicit in the diagram for the various elements of the manpower requirements and the labour force do not relate to any particular country. The concepts used in the diagram are as follows:

Manpower requirements: The manpower which is required at the existing wage rates to operate the available production capacity; so that there is a high level of capital productivity, and a high level of labour productivity with regard to manpower in categories in short supply.

Conditional manpower requirements: Some of the manpower requirements are only conditional, in the sense that certain conditions have to be met before the production capacity is brought into use and manpower actually employed. Three important types of reasons why manpower requirements may be conditional are:

(a) a shortfall in effective demand for goods and services in the economy as a whole, to such an extent "Keynesian" or "involuntary" unemployment exists;

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[1] The present summary and diagram form the basis of a lecture delivered to the First Study Cycle.

(b) because of a lack of foreign exchange or for other reasons, there is a shortage of certain key inputs (such as spare parts or certain raw materials) in some employing establishments, or manpower with certain skills is not available, and production cannot proceed;

(c) the demand for the products of certain employing establishments may not be sufficient, because for instance they are not able to adjust to changing patterns of demand, they are unable to meet competition from imports, or growth of production capacity in the various economic sectors has not been properly integrated.

Unfilled vacancies: Relate to the jobs which employing establishments wish to fill, but for which they are unable to locate manpower in the categories required.

Inadequately filled jobs: Where employing establishments are unable to locate manpower with the skills required, unfilled vacancies do not usually last for very long. Sometimes the functions of jobs are changed by employing establishments so that they can be carried out by the type of manpower available; sometimes the organisation of work of the establishment, and consequently its occupational pattern, is changed; and sometimes the production capacity goes out of production. More usually, however, jobs are filled by upgraded manpower without the required skills at the point of engagement. Some upgraded manpower becomes proficient after a period of experience on the job. Other upgraded manpower, however, cannot overcome the lack of basic educational and vocational training: the jobs remain inadequately filled in the sense that the lack of skill results in low output from the capital equipment, wastage of materials, faulty maintenance, poor quality products, all of which are indicative of low capital productivity.

The manpower shortage: The manpower shortage consists of not only the unfilled vacancies, which may often be of negligible numbers, but also the conditional manpower requirements to the extent that they are for manpower in categories not available, and the inadequately filled jobs. The latter elements constitute the hidden part of the manpower shortage which is of considerable significance in many less developed countries.

Frictional manpower shortage: Part of the manpower shortage, usually a relatively small part, is frictional, i.e. manpower in the categories required is available either being unemployed or underemployed, but is not employed or fully employed because the employers and the manpower concerned have not come together. The greater part of the manpower shortage in less developed countries is usually non-frictional, i.e. persons in the categories required not being available at wages which can be paid.

The labour force: The economically active population, i.e. the employed and the unemployed, constitute the labour force.

Persons fully employed: A proportion of those in employment, but only a proportion, are fully employed in that they are working normal length weeks and at a reasonable level of labour productivity. It should be noted that some persons in this category are filling their jobs inadequately in the sense indicated above.

Persons in underemployment: A proportion of those in employment are underemployed in that, for the whole year or parts of the year, they are working less than the normal hours each week or are working at a low capacity and with low labour productivity. Underemployment of manpower in categories of over-supply does not in itself result in a lowering of capital productivity: rather it results in a sharing of the available work amongst a larger section of the labour force than if there were no underemployment. Underemployment of manpower in categories in short supply, however, not only results in a waste of scarce skill, but also in a capital productivity lower and a manpower surplus higher than might be.

The unemployed: Persons not in work but available for and seeking work.

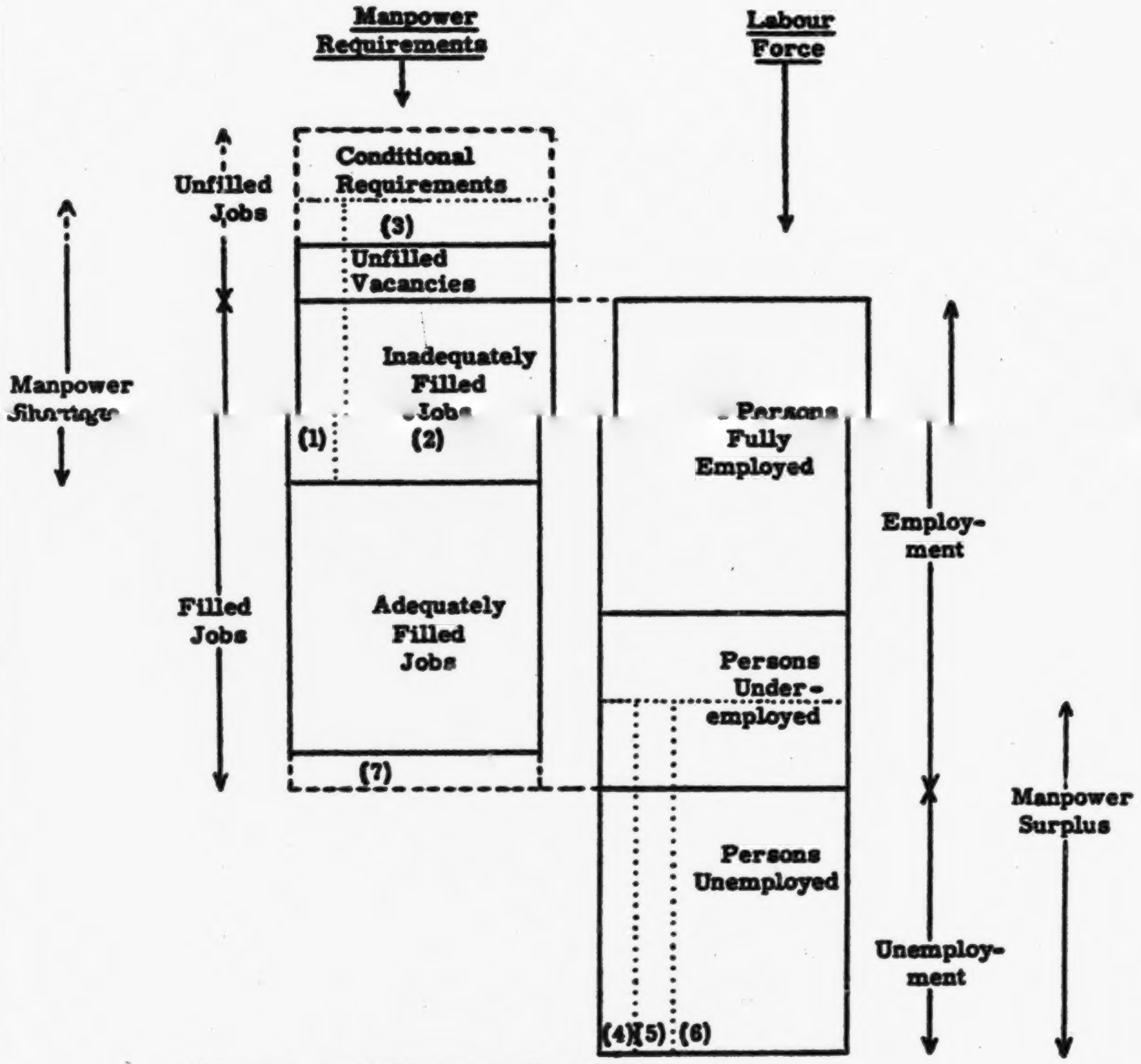
The manpower surplus: The manpower surplus is made up not only of the unemployed, but also of a hidden element, the underemployed to the extent which such manpower is not utilised at a reasonable level of productivity.

Frictional manpower surplus: This corresponds to the frictional part of the manpower shortage.

Conditional manpower surplus: The manpower surplus is conditional to the extent that the surplus would fall should the manpower requirements that are conditional be met.

Structural manpower surplus: The greater part of the manpower surplus in most lesser developed countries is structural. It results from a lack of manpower requirements at the ruling wage rates.

RELATIONSHIP BETWEEN MANPOWER REQUIREMENTS AND THE LABOUR FORCE



(1) Frictional Manpower Shortage
(2) Non-Frictional Manpower Shortage
(3) Relates to Conditional Requirements for Skilled Manpower in Short-Supply
(4) Frictional Manpower Surplus
(5) Conditional Manpower Surplus
(6) Structural Manpower Surplus
(7) Relates to Underemployment of Skilled Manpower in Short-Supply.

EMPLOYMENT SERVICES

by R. Jackson

What is an employment service?

We cannot do better than refer to I.L.O. Convention No. 88 concerning the Organisation of the Employment Service. The first paragraph of Article 1 of Convention No. 88 states that "each member of the International Labour Office for which this Convention is in force shall maintain or ensure the maintenance of the public employment service". Paragraph 2 of Article No. 1 states "the essential duty of the employment service shall be to ensure in co-operation where necessary with other public and private bodies concerned, the best possible organisation of the employment service as an integral part of the national programme for the achievement and maintenance of full employment and the development and use of productive resources". The significant phrase is "the best possible organisation of the employment market". What is an "organised employment market"?

An employment market can exist anywhere but it can either be organised or unorganised. It is organised if it is one in which manpower supply and demand are measured and action is taken towards the reduction of manpower surpluses and shortages which are current or are likely to develop.

Now, for obvious reasons, employment markets differ from one country to another and from one area of a country to another area because employment situations vary. In developing countries the problems are likely to be different from problems in the industrialised countries. Nevertheless, although the problems may differ there are certain functions regarding employment service work which are common everywhere. Let us examine the functions of an employment service.

Roughly speaking there are two major types. On the one hand there are operational functions, and on the other there are research functions. Consider first the operational functions. The major operating function of an employment service is placement; this is the traditional role of an employment service. In carrying out the placement function an employment service has a three-fold responsibility: to the worker by providing him with suitable employment quickly; to the employer by providing him with the workers he needs; and to the State by giving special attention to the filling of vacancies which are in the national interest. To carry out these responsibilities the staff of the placement service perform the following tasks. First of all they register people who are seeking employment according to their qualifications, experience and desires, and then evaluate their capacities. Secondly, they obtain from employers precise information about vacancies and the job requirements of those vacancies. Thirdly, they match the two together and refer suitable applicants to appropriate vacancies. Fourthly, they circulate particulars of applicants and vacancies from one local office to another, either in a local area or in a regional area or even in a national area. Fifthly, they facilitate the movement of workers from one area to another if by any chance there are more suitable job opportunities in another area outside the home area. Lastly, they assist, where necessary, in the temporary transfer of workers from one area to another as a means of meeting temporary local maladjustments in the supply and demand for workers.

Placement, then, is the basic operational function of employment services and stemming from placement there are the subsidiary operational functions.

First of all, vocational guidance and employment counselling. The process of vocational guidance involves the giving of assistance to young persons in solving problems of choice of occupation, having regard to the individual's characteristics and their relation to employment opportunity. You have already had a lecture on vocational guidance from a colleague of mine, I believe, and I do not propose to develop this particular theme.

Employment counselling concerns the assistance given to persons in solving special problems relating to the obtaining or holding of a job. It involves reviewing and evaluating the present and potential qualifications of persons who have not been able to get satisfactory employment. An important point to note here is that this does not necessarily mean that that enquirer should be persuaded to change his job. In the light of the counselling interview it may well be decided that the job in which he is at present is the one best suited to him in view of what he can do and what is available by way of alternative. This happens quite often. You may ask - what is the difference between employment counselling and vocational guidance? There is really very little; we normally speak of vocational guidance as applying to school-leavers, i.e. young persons starting out on a career, whereas employment counselling normally refers to adults who are already in employment and want further advice.

Another operating function concerns vocational training which is usually defined as any form of training by means of which technical or trade knowledge or skill can be acquired or developed. Employment services are frequently called upon to assist in the determination of training needs, in other words, in a given area - What types of skilled workers are scarce? Should training be given in these occupations? If so, for how long and how many should be trained? The employment service can also assist in the selection of suitable persons for training by determining which workers are likely to benefit from vocational training, and lastly it can assist in placing trainees in employment once they have completed their training courses.

Another subsidiary operational function which is associated with placement, is vocational rehabilitation. Vocational rehabilitation is a comparatively sophisticated function. It has been principally developed and refined in industrialised countries but a start has also been made in certain developing countries. It is the term generally applied to those activities whose purpose is the satisfactory settlement of disabled persons in suitable employment and it includes identifying, registering and advising disabled or physically handicapped persons and placing them in suitable employment. We usually refer to the placing of disabled persons as selective placing because the number of openings which are open to them is limited frequently. It may even be necessary to provide what is called sheltered employment. This is employment in certain occupations which may be restricted by statute to disabled persons. The main aim of a vocational rehabilitation service is four-fold. First, to demonstrate and improve the working qualities of disabled persons. Secondly, to emphasise their abilities and working capacities, not their disabilities. Thirdly, to promote working opportunities for them, in other words to seek out jobs which can be performed by disabled persons, and fourthly, to overcome employment discrimination against disabled persons. The last mentioned is particularly important; it is commonly believed that a handicapped person cannot do a full day's work. This is quite wrong; many disabled persons are capable of a full day's work under normal conditions.

Another subsidiary function is the operation of a migration service. In many countries international migration has considerable significance and the employment service plays a major rôle in assisting the movement of population. I. L. O. Convention No. 97 concerning Migration for Employment provides, among other things, for the co-operation of national employment services and other services connected with migration. Furthermore, the basic Convention regarding Employment Services, No. 88, provides in Article 6, that "the employment service shall take appropriate measures to facilitate movement of workers from one country to another which may have been approved by the countries concerned". How can the employment service help in furthering officially sponsored migratory movements? As regards the emigration countries, by determining the types of workers surplus to current requirements, by ascertaining those who are willing to emigrate, by giving advice such as the types of jobs available abroad and whether financial assistance by any assisted passage arrangements, is available, and by arranging recruitment procedures, selection, transportation, etc. In the immigration countries, the employment service can help by ascertaining the types of jobs available to immigrants, by arranging the dispersal of immigrants from ports and by making preliminary arrangements for their accommodation. In other words, the employment service helps to oil the wheels of the migration machinery.

Those, broadly speaking, are the major operational functions of the employment service. Now we come to the research functions of employment services.

The first and most important is the collection of employment market information. It will be obvious that the various operating functions I have already mentioned cannot be organised and carried out in a vacuum. There must be knowledge of the local employment market, the regional employment market and the national employment market, on which to base the administrative organisation for the conducting of these operations. To have this knowledge requires the systematic collection and analysis of employment market data, both quantitative and qualitative.

Quantitative data includes statistical information about the basic transactions of the local offices of the employment service such as the number of applicants for employment, the notifications of job vacancies in the area and the number of placements made by the local office during a given period of time.

Qualitative data consists of non-statistical information about such things as job-seekers' attitudes, the local industrial situation and employment trends. This type of information is the more interesting but also the more difficult to obtain. It involves the analysis of facts and opinions and the making of judgments. Facts and opinions about the local employment situation are obtained by the local office of the employment service as a result of day to day contacts with employers or from questionnaires addressed to employing establishments. What is required are the answers to such questions as: Why have employers stood off workers? Why do they want to take on more workers? What are their recruitment difficulties and likely employment prospects in the next few months?

All this information, statistical and non-statistical, is assembled and reported by the local office of the employment service usually in the form of a report of the local employment situation covering a specified period, usually one of one month or one of three months. These reports are sent - depending on the administrative organisation - either to the regional office or direct to the headquarters of the employment service. There they are assembled, analysed, supplemented by any national information, and the final result condensed into a report covering the entire country. The national report is, or should be, circulated on a wide basis, so that the facts about the employment situation get the maximum publicity. Now, why should these facts receive publicity? Mainly because there is widespread interest in this type of information, not only within the employment service itself but also outside.

Within the service employment market information can be used in evaluating the results of the local office operations; it can be used in preparing budget estimates for the financing of the service in the year to come; it can be used in planning future policies; in developing staff training programmes; and in determining local office staffing needs.

Outside the service, information about the employment situation can be used by employers, for instance when planning factory locations, or the introduction of in-service training schemes. Secondly, the information can be used by workers' organisations to assist them in advising their members about employment opportunities; in planning and adjusting apprentice schemes; and in determining their membership policies. Thirdly, this information can be used by other government departments. For example, if a Ministry of Education is concerned with vocational and technical education, they will need to have some idea of the types of occupation which are in short supply in order that training course output targets may be planned realistically. Again, in some countries there is legislation governing the location and distribution of industry. The reports of an employment service on the employment situation are very useful to the government department which is responsible for the application of this policy as one of the main considerations in these matters is the supply of labour skilled or unskilled. A Ministry concerned with production matters in considering the prospects of stepping up production in certain sectors will have to take into account the availability of labour in terms of geographical areas. Lastly there are the Ministries concerned with general community development such as housing, transport, health, social services and welfare. All these questions must be considered in the light of employment market patterns.

The second research function of employment services is occupational research. It does not require much thought to realise that for effective placement work there must be adequate occupational information. Placement officers must know what workers in different occupations do, how they do it, what is involved and why they do it. Without this information it is impossible to conduct a proper placement interview. The placement officer must have detailed information about any given occupation. He does not have to carry all this in his head, of course, but he must have reference material, usually in the form of a manual, telling him about occupations, what the duties are and what the qualifications are. To prepare adequate occupational information for the use of placement officers involves a good deal of research into occupations and this should be one of the first tasks of the staff of employment services in developing countries; to visit various employing establishments to find out what exactly people do to earn their livelihood - how they perform the job, why they do it and how it fits into the general production process - and on the basis of these visits; to compile a series of job definitions in the form of a national occupation classification system. The importance of such a classification system is not only related to the placement function; it is in fact a multipurpose tool and is essential for the proper classification of occupational data collected under employment information programmes and also under manpower information programmes. The mention of the latter needs some explanation of the subject of manpower.

One of the main preoccupations of the developing countries, and indeed many industrialised countries, today, is economic development programming. As you know economic development is the process of bringing productive resources, i.e. capital and entrepreneurship, natural resources and manpower, to fuller and more effective use. When economic plans are being formulated much emphasis is placed on capital and capital formation, and also on availability of raw materials. But one senses a tendency to give less attention to manpower. This certainly has happened in the past when the assumption has been that there have been adequate reserves of manpower available. This is not so, of course. There may be plenty of unskilled workers but expansion in the industrial sector, which is one of the major targets of economic development, requires a steady supply of trained workers to perform the new tasks and operate the new industrial processes. Mention should also be made of the need for raising levels of skills to improve productivity in the traditional sectors of the economy, e.g., agriculture.

Hence, the growing realisation of the need to introduce methods of techniques of manpower planning into the general process of economic development planning. But manpower planning cannot be carried out without a continuing flow of manpower information. Manpower information deals with manpower in its widest sense; demographic information such as population estimates; labour-force data; population and labour force projections; the manpower requirements of economic development plans; the output of training establishments, academic, professional, technical and vocational, and so on.

I spoke earlier of employment information collected by the employment service. Employment information is an important part of manpower information and the difference between the two is quite simple. Employment information relates to data about employment, i.e. workers in employing establishments. Excluded - and this is more significant in developing countries than in industrialised countries - are self-employed persons. When you remember that perhaps 60-70 per cent. of the labour force in certain African countries consist of self-employed peasant farmers, you can see how the employment market is a comparatively small sector of the over-all manpower picture. Nevertheless, the important thing about the employment market is that this is the segment which is most likely to fluctuate and expand. Hence the importance of the employment market research function of employment services.

Having digressed for a moment into the field of manpower planning let us now return to employment services as such and consider the evolution of employment services. Some sort of placement function has been going on for many years, but it was not until the early 20th Century that the first national employment service was created. This was in Great Britain in 1909. The British and the other early employment services were first conceived as placement services to match workers with jobs and these were the lines on which they originally developed. Quite early on it became apparent that occupational information was necessary and so the first research function - occupational research - was developed. At a later stage these national services became active in the fields of vocational guidance, training, rehabilitation, etc. It also became apparent that the transactions of the service threw out useful employment market information: the number of unemployed, the number of placings, etc. and the second research activity became established. More attention became to be focussed on this side of the work as the industrialised countries came up against serious social problems such as economic depression and national emergencies. It became apparent that some sort of planning would have to be done and for planning, facts about the situation are needed. Consequently, more and more attention was focussed on employment market research.

As you can see, the evolution of employment services in the industrialised countries has been based on empirical methods and it is only within the last two decades that a theoretical approach to the development of employment services crystallised. But already the developing countries were beginning to introduce employment services, and it must be admitted that in a lot of cases fundamental mistakes were made. The major reason was that in many countries the service introduced was a pale imitation of a sophisticated system as operated in an industrialised country and was set up without a careful study being made of the conditions with which the new service was expected to cope. It was common for a placement service to be introduced before any study of the employment market had taken place and before very long it became apparent that the placement service was making only a marginal impact on the employment market. It was reduced to dealing with unskilled workers, domestic servants, etc; traditional methods of labour recruitment went on and skilled workers found their own employment, often after a lot of trouble. Unfortunately this situation was not recognised in time and deterioration began to set in. Critical eyes were cast by the financial administrators on the costs of these services in terms of the results they were achieving. The atmosphere grew in these services of justifying their existence at all cost and it was not unknown for vacancy placement figures to be deliberately inflated. Inevitably, the morale of the service went down and this increased as the existence of the service became to be threatened from year to year.

Attention was given to these problems by the I. L. O. and the result of their investigations was published in an article in the International Labour Review of April 1956 entitled "The Organisation of Employment Services in Economically Underdeveloped Countries". This gives in considerable detail the reasons for the partial failure of the employment service in the developing countries. The lesson which must be learned is that emphasis should be given in the first place to employment market information and occupational information. It must be known where the employment market areas are and which are the major ones, where industry is situated in the country and what processes and occupations are involved. When, and only when, this information is available, is the time to start thinking about opening placement offices, and then it is as well to make haste slowly. With only limited financial resources, it is better to concentrate on ensuring the effective functioning of one pilot employment office rather than opening a network of small ineffective offices. Once the value of the pilot employment office has been demonstrated there will be a much stronger case for the allocation of additional finance for the gradual expansion of the service as a whole. When money is scarce it is especially vital to ensure that priorities are right. Occupational and employment market research must come first; then placement; and then vocational guidance etc.

And now to wind up, a few words about the organisation of employment services. First, if the service is to be soundly based, its existence should be established by statute. Secondly, it should have its own budget, preferably one separate from that of the Ministry of Labour. Thirdly, there should be a carefully planned personnel policy and this is important. The officials who staff an employment service are dealing not with facts and figures, or bricks and mortar, but with people and people usually in need of advice. An essentially human and sympathetic approach is needed and, so far as is possible, staff recruitment procedures should be framed to take these qualifications or rather attributes, into account. Fourthly, there be a headquarters organisation in which there should be a staff training unit for training staff in procedures; an inspection unit for the dual purpose of ensuring that local office staffs are maintaining common operating standards, and developing improved procedures; an employment unit whose concern should be placement policy; and a vacancy clearance section to deal with the clearance of vacancies between various geographical areas so that vacancies which cannot be filled in one place are brought to the attention of work seekers in another part of the country. On the research side there should be an occupational analysis unit dealing with research into occupations, and an employment information unit to deal with employment market research; the studying of local office employment reports; the compilation of reports on the employment situation; and liaison with whatever manpower planning authority may exist.

A regional office organisation you may or you may need depending on the circumstances. All it is really is a smaller version of a headquarters but with a more closely defined sphere of responsibility. It is the intermediate step between the local office and the headquarters.

At local office level the organisation should comprise at least three sections; a placement section, an employment information section and an employers' relations section. Contacts with employers are essential. Without the systematic development of good relations between employers and employment service the service cannot operate effectively.

Under certain conditions, dependant on geography and the size of the organisation, a certain number of headquarters' responsibilities such as inspection, staff training, vacancy clearance, and employment market information, may be delegated to regional offices.

This is only the briefest outline of the organisation of an employment service but the subject of employment services is a big one and in the short time available for this talk many aspects have had to be dealt with only briefly.

(This lecture was delivered originally in English)

MANAGEMENT DEVELOPMENT AND ECONOMIC GROWTH

by R. Wynne-Roberts

The basis of this paper is one presented to a recent meeting of experts in productivity and management in Latin America in Santiago, Chile.[1] The meeting was held jointly between the I. L. O. and the Economic Commission for Latin America (ECLA).

Introduction and Definitions

First of all, I shall give you some definitions because I think we had better be quite clear what we are talking about. Next I shall consider very briefly the determinants of economic development - those factors which determine the rates of economic development. Then I shall discuss the attributes of managers (and I will define managers because the term) is used very broadly,) which are necessary if a country is to progress and develop. Finally, I shall discuss rather briefly what is needed by a country if it is to have a balanced development of its managers and hence have a balanced economic and industrial development. Let us begin with the definitions.

The first definition is that of "economic development" - this is one definition and no doubt there are many others - Economic development may be thought of as a process which results in a sustained long-term increase in real national income per capita. The central thread in this process is continuing rise in the real value of the goods and services produced in the economy. This rise is the result of changes in any one or combination of the following determinants:

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[1] LAPM-62, Working paper N1, Proc-EC-11-101, prepared for Technical Meeting of Experts of Management Development and Productivity in Latin America, held in Santiago, Chile, 15-26 October 1962.

(a) the allocation of the economy's resources among various alternative activities;

(b) the quality and quantity of the economic resources (that is to say natural resources, capital, and the services of men devoted to productive activities);

(c) the technology employed in the productive process; and

(d) the quality, attitudes and abilities of those in positions of management.

Quite clearly, if the per-capita income is to rise there must be a rise in the national income which is greater than a rise in population. This is rather important.

In defining management, I must make a point which is peculiar to the English language, I do not think this confusion quite arises in French or Spanish, and that is that the term "management" is used in two sense. It is used:

(a) for the people who manage (you talk about, management does this or management does that meaning directors and heads of departments and so on); and

(b) management as an abstract term meaning the process of managing.

I may be forced to use this term "process of managing" in both ways. There is not a satisfactory alternative, but in general what I am talking about in this discussion is the people who manage. Where I am using the term in any other sense I shall try and make it quite clear. One definition of management has been defined as: the hierarchy of individuals who perform specified critical functions in the organisation. It is not a term I care for very much but it is probably as good as any other. We may make it clearer by defining what are the functions of management. These have been described by Professors Harbison and Myers in their book Management in the Industrial World as, first of all - the handling of uncertainty. Management comes most strongly into the picture in all enterprises when there is a situation of uncertainty. A decision has to be taken from a possible choice of decisions. Secondly, management is concerned with planning and *innovation.* Innovation in a sense of, in the case of a manufacturing firm, new products, new processes, new markets, new location, new ideas, setting up of new activities. Thirdly, the routine activities of *co-ordination, administration and control of the day-to-day activities of the enterprise* and beyond that - *routine supervision* as opposed to uncertainty. There is another function of management, which the economists would call the *entrepreneurial function* - taking risks. Increasing risk is being taken by professional managers rather than those classified as "entrepreneurs" both in the public and private sectors, but it is extremely difficult to define the point at which the taking of risk becomes what we can accept as fully managerial decisions. I have not including the taking of risk formally under the functions of management because it is what you might call a disputable sector. However, most paid managers in public or private sectors, do in fact, at senior level, have to undertake quite a lot of risk in some form or another; with somebody else's capital, as a rule not theirs. The sort of individuals who form part of management may thus be owner-managers, the vast majority even today, in industrialised countries and even more so in the less industrialised - directors, managing directors, general managers, departmental managers, administrative officers, specialists in management techniques and first-line supervisors. These may be in the public or private sectors because the distinction in as far as management is concerned is often very blurred, in many countries. For example, in India there is an enormous public sector carrrying out many activities which are being carried out by the private sectors in many other countries, the United Kingdom for example. In the public sector it is often very difficult to identify precisely who are the management, because in certain countries, Poland for example, where we have experts working at the present time, it is very difficult to define who takes managerial decisions at various levels. It may be a minister, it may be a director-general, it may be at one of the industry associations - various management decisions are taken at various levels both in government and in industry, but all these people - whether ministers, directors-general or functionaries - if they are taking decisions or taking controlling actions, or planning for industry and for industry-type enterprises, then in fact, they are managing - call them what you like. Today management and the need for management penetrates deeply into the public sector in practically every, if not every, country in the world. In this connection I used the term "management technique". I would define this: a management technique is a systematic procedure of investigation, planning or control which can be applied to all management problems of a specified type wherever they may occur.

These management techniques are things like work study, production planning, cost control, market research, there are dozens but they are working tools of the manager. Finally, I would define "management development". The word "development" is used because it is the further development of the adult and practising manager at various stages throughout his career from the level of junior manager up to and including the time he reaches the top. Today it is the practice in many countries and particularly the United States for the very topmost managers themselves to pursue their own development by attending courses, conferences, discussion groups, seminars, etc. The French word is "perfectionnement"

The Determinants of Economic Development

The determinants for economic growth were said to be an allocation of the economy's resources, the quality and quantity of the economic resources (including people) and the technology employed in the production process. It is the allocation of these resources which determines the extent to which the production of the economy can approach the optimum mixture and thereby the possible maximum or optimum output created by the resources available and the technologies used. There is no doubt at all that all countries in the world, even the United States, where production has been brought to a fantastically high level, are in fact producing very much below what they could be producing with the same resources. In many countries this gap is enormous. From the economic point-of-view this means that output of either goods or services can often be expanded by measures that can permit or encourage a re-allocation of resources in the direction of optimum allocation by removing market imperfections or by direct decisions. In addition it means that if economic growth is the principle goal of the country, as new resources become available, their allocation, whether by market mechanisms or government policy, should be to activities to which they can make the greatest contribution to growth. There is no optimum allocation of resources that you can say applies to all countries, but what is extremely notable in many countries is that the resources are, as a rule, very far from distributed in a way to provide optimum growth and there is often a utilisation of resources for non-essential purposes, a luxury, which particular countries at particular stages of development cannot afford. This allocation of resources is essentially the result of a series of decisions made more or less efficiently on what is to be produced, how and in what quantity, and these decisions may be made by individuals acting on their own, gathering and considering information themselves and then deciding on a course of action which they then follow. This is the case of the vast majority of the owners of small enterprises. They have to make decisions themselves, gather what information, often rather inaccurate, that they can and take action based on their decisions. One-man businesses are the great majority in the world. However, such decisions may equally be made by heads of organisations, large or small, public or private. The decisions as to what shall be produced and how it shall be used, in more or less free enterprise economies are taken for the most part by this group of people - the managers, who we shall see have a profound influence on the economy. These decisions may have to be made subject to restrictions laid down by governments, for example, of imports of machinery or materials, fiscal or other policies which are designed to encourage or to discourage particular lines of action. Such a case might be protective tariffs for the textile industry, which the government is trying to encourage, or contrarywise, very heavy import duties on say, machinery, to discourage undue capital expenditure. Very rarely are the decisions of the managers, the people who are managing the economic activities, taken in a vacuum; in very few countries in the world are they taken without certain artificially imposed restrictions, as well as restrictions imposed by economic forces. The sort of decisions which the managers have to take and which have a direct affect on the country are:

(a) whether the production should be expanded or contracted;

(b) whether more or fewer services should be provided;

(c) whether new products or services should be added;

(d) whether entirely new activities should be undertaken.

Whenever one of those decisions is taken it affects the national economy, whoever takes it, whether it is a minster, whether it is an individual owner or whether it is a paid manager. These decisions are part of the undertaking of risk and part of innovation in management and are very closely dependent on other functions of the management. How good or bad these decisions may be will depend, to a very great degree, on how well the people taking the decisions know their jobs. This is where the need for management development training becomes imperitive. In countries where the bulk of manufacturing and other activities is carried out by a very large number of small enterprises, of course, the net affect on the economy is due to a resultant of a very large number of decisions taken by many small owner-managers. You may have cases where one or two or a few enterprises dominate certain sectors of the economy and their decisions immediately have an affect. Sometimes there may be a banding into associations which may then decide collectively to take a certain decision in a certain direction or bring pressure on the government to take certain action. Thus, in the allocation of resources, the managers, through their decisions, play a critically important rôle.

The next point to consider is the quantity and quality of resources devoted to productive activities. These break themselves down into natural resources, capital and manpower. If we turn first to natural resources it is clear that the production process is very largely one of combining and transforming raw materials from the state in which they are found in nature to that in which they are demanded by the consumer, whoever he may be, even if it is a matter of hacking coal out of a mine and delivering it in suitably sized pieces to people with fireplaces or to railway engines. In any given state of technology, the nature, quantity and quality of the natural resources available to the economy places certain restrictions on the possibilities of expanding production. These restrictions can, however, be varied by studies and surveys resulting from a discovery of hitherto unknown resources, or by trade, by importing or exchanging resources which you need, like - say - fuel-oil for resources which you may want - say, bananas or machinery. Natural resources play an essential rôle in the production processes and consequently on economic development, but where the natural resources of a particular country are fixed by nature, although they can be supplemented by imports, the value of resources within any given area from the point-of-view of economic development depends on how well the people in that area or in that country know how to use them. In most cases the management of individual enterprises, except the great giants or State enterprises, can do very little to affect the availability of natural resources. It can, however, affect very substantially the way in which known resources are used by finding new ways to use them, by changing technologies and it is part of the innovation duties or functions of management to make the best possible use of the existing resources, to find new ways of using them, perhaps new ways of development of exports.

In the case of textiles, for example, there is enormous competition in the world for grey cloth. Almost every country is producing grey cloth, but the enterprise which can develop some really original lines in printing, something that attracts people and can be marketed abroad, contributes to the better use of, say, the country's cotton crops, than merely by turning out grey cloth in competition with the world. By imaginative skill in developing new weaves, new printing patterns and so on, the value of the country's cotton resources, may be added to.

One can hardly ignore or hardly question the fact that capital is a vital factor in the production process and in economic development. Capital, whether in public or private hands, is the means which permits man to do more than his own skill and power alone could accomplish. Generally speaking it can be said that whenever economic activity is carried on, capital is employed and the output per unit of manpower tends to fluctuate directly with the changes in capital per unit of manpower. This is, of course, because changes in production methods are tending towards greater mechanisation and, making processes more automatic. One of the principal ways of increasing output in an economy is to augment the supply of capital employed in combination with raw materials in the labour force.

Here the managers have an extremely important rôle. In private enterprise they control at the top level, the profits of the enterprise and can thus determine whether these are to be productively invested by the firm, thus creating capital to start a new enterprise, for example, or to expand an existing one; by whether they are going to distribute them to the owner or owners who may also be the managers to be spent on luxury goods or simply hoarded in the bank. Some of what may be spent by the owners in consumer goods, may of course, go back into circulation for consumption but very often it may not, - or not to any useful consumption.

The degree of the political or economic stability of the country has obviously got a very strong and perfectly natural influence on the margin of profit which owners in the private sector are likely to demand, and to the extent to which they are willing to reinvest within their own countries,* this is only human and natural. The economic justification for large profit margins in the countries which are still at the beginning of industrialisation is that they allow rapid capital accumulation for starting further enterprises which will extend employment opportunities and, if possible, replace goods previously imported and, to that extent, and provided the capital is used for that purpose, large margins can be justified, as long as they can be obtained. Heads of public enterprises may have less to say, less influence over the disposal of company profits than heads of private ones but at the policy making level which may, again, be ministerial level, the sort of decisions are made which are not very different in their nature from those made by the ordinary private owner-managers, and one of the major problems of top management in many developing countries, and some others where there is heavy unemployment or underemployment, is that there are often very heavy pressures on State enterprises to provide jobs. In many cases State enterprises - railways and other enterprises - are very heavily overstaffed with resulting inefficiencies and lack of profits or even heavy losses. This is a major problem. It is in a sense a political problem but it is nevertheless a real one and there are many managers of State enterprises who are well aware of it but can do little.

Capital only becomes meaningful when it is translated into terms of productive resources - land, buildings, plant, equipment and machines. It is managerial knowledge and skills, the attitudes and capacity for analytic and synthetic systematic thinking that are of fundamental importance in determining the effectiveness with which any capital sum may be employed. It is probably true to say that a management whose members are all highly skilled at their jobs might in many instances obtain twice the output from a given sum invested and in capital resources, obtained by an average management, at least in most developing countries. A striking illustration of this has recently been furnished by the Economic Commission for Latin America which has carried out a study of the textile industry in Brazil with a view to furthering a large-scale reorganisation. It was discovered that among firms of closely comparable size, age of machinery, products and so on, the differences of productivity were in the order of four to one, that is to say, the most efficient firms were four times more productive than the least, which must be largely attributed to the qualities of the respective managements, since other factors were more or less similar. A striking example of the savings which can be affected in buildings alone was provided during a seminar on work study which I ran in Japan. In one fairly large enterprise the participants of the seminar, who did two days of rather intensive theoretical work and four days practical work inside the factory, were able to show that in one heavy assembly shop alone, by relaying out the shop they could double the production and save a building programme worth a million dollars. The implications for the company's whole building programme, running into millions of dollars, were enormous. These are the sort of savings to be made by proper use of management techniques, and the use of the capital for imported machinery, for example, can be very substantially improved by the proper use of that machinery, its maintenance, planning of its work, operation and so forth, so that it may in fact be possible to save large sums in imports for the same output as between really good management or a medium or indifferent one.

The second factor in production is manpower and that includes everybody - the skilled and the unskilled workers, technicians, professional persons, the civil administrators, the managers - the whole labour force - and it is always as a rule possible provided the other resources are available, to expand output by increasing the size of the productive labour force, bringing into economic activity persons previously inactive from an economic point-of-view. However, what is very often more important is improving the quality of the manpower currently employed by better training, by the development of their natural skills and aptitudes, by opportunities for improving themselves and undertaking positions involving more skill and more responsibility. The management has a supremely important rôle to play - it exercises control over a number of people productively employed, in various ways. It can, for example, decide to work second or third shifts in certain industries which means a more intensive use of the capital. And this may be more than justified where there is a lot of labour and a shortage of capital and where the demand justifies increased production. By the manner in which management applies its management techniques it can determine how many workers are needed at various processes and work points, particularly where this type of work is mainly of a manual nature. The difference between the average and the best is likely to be very great in this field also.

The third factor is the technology employed and in most of the countries with which we are concerned these technologies may have to be imported from abroad, at least at this stage, but there is no question at all that technological change is a major contributor to the process of eliminating the disparaties which exist in the national product between the different countries, between the more advanced and the less advanced industrial countries, and here also the rôle of management is a major one. The technology used in the country is determined by many individual decisions up and down the line, as to what technology is to be used in the production process or in the service industries.

When talking about technology we may be talking about not only productive machinery, but also, say, about motor buses. Should large or small buses be used, or diesel buses or petrol buses or very modern buses or less modern buses? - It applies all the way through the service industries and even to office machinery - should mechanised accounting be used? Should we do it by hand? Or some compromise between the two? The choice of technology for developing countries does present a very real problem and the problem has not always been solved on purely technological considerations. For example, in setting up new industries there is often a tendency to try to obtain the latest very complex and costly machinery - highly productive - where in fact, at a given stage, and especially where the goods concerned are for internal consumption, well proved general purpose machines or plants might do as well or even better in the countries concerned. If high production machinery involves very highly skilled maintenance processes, electronic and other highly skilled engineers, a country may not be ready, may not have a sufficiency of skilled technicians to undertake the maintenance, and the result may be very costly. I refer back to the study of the Brazilian (ECLA) textile industry. It is unusual in this respect, that the study presents the textile industry with three alternatives, in its re-equipment; it examines the economic and other implications of these including the effect on employment which is very considerable. The three alternatives it looks at are:

(a) improving the management and organisation but doing nothing about the existing machinery at all, although much of it is very old and very shakey according to the report;

(b) re-organising and improving the management and quality of the workers doing absolute essential replacements or bringing up to date machinery - it costs a lot more of course;

(c) replacing all old and out-worn machinery by the most modern possible machinery.

The study comes out on economic and cost grounds squarely for the second alternative; it also comes out for this alternative on grounds of minimum displacement of labour force which, were the third resorted to, would be extremely large. It is the first study of its kind that I know of which has, in fact, presented managements beforehand with the possible results of its decisions in both macro- and micro-economic terms. The many countries which have large underemployment or unemployment problems may find that on economic grounds alone it is cheaper to go for the less advanced and less high production processes but to utilise what they have got - manpower - much more effectively. Summarising, then, management's responsibility in this I will quote briefly what was said in 1959 at a meeting of Experts in Productivity and Management, at Bangalore:

> "Primary responsibility for achieving a high level of productivity and efficiency within the undertaking rests, however, with the management, especially with the top management. The middle management - heads of departments and assistant heads - has the responsibility for initiating, carrying through and maintaining improvements in productivity, but it is the top management which decides major questions of policy, establishes the organisational structure of the undertaking, allocates duties and responsibilities and is responsible for the over-all co-ordination of all activities in the enterprise. The top management is also primarily responsible for the quality of the relations between management and workers within the plant. Unless top management performs its functions efficiently the best efforts of middle management, supervisors and workers are likely to be frustrated."[1]

The Attributes of Management Necessary for Progress

What sorts of attributes does management need if it is going to progress? It needs three, I think.

First of all it needs an attitude of mind favourable to change. Resistance to change is a well known phenomenon in all countries and at all times. The majority of us tend to dislike change and those who tend to try and enforce change render themselves unpopular - this applies everywhere - in all sectors, private, public and often in our private lives as well. Secondly, it needs a breadth of outlook and a capacity for long-term thinking. Thirdly, the necessary knowledge and skills of managers.

The point is that in the developing economies the industrial society towards which many of them are progressing makes demands on its members which are different and often incompatible with those of agrarian societies. This is true whatever form of industrial society is considered. For example, the organisation, discipline, mobility of the labour force; the content, the purpose and scope of the educational system; the division and specialisation of labour; ethical and legal codes that permit impersonal business relationships, are all of great economic importance in the industrial society. But they are a lot less important in the agrarian community and what has been developed under the agrarian system very rarely meets the needs of the industrial one.

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[1] I.L.O.: Raising Productivity, Geneva 1959.

Obviously you do not bring about changes like that easily, especially in countries where the owner-manager is common and where he may be very comfortably placed both socially and financially. He will not be happy to accept those changes easily - none of us would be. For example, as technology becomes more complex, the entrepreneur, the owner-manager or top manager, even in the public sector, becomes less self-sufficient and more and more dependent on other people. He is dependent on highly skilled technicians - he is dependent on technologists, he is dependent on people who have skills which he has not and, therefore, he looses, by the very force of circumstances the powers for independent and authoritarian decision which he had under a simpler state of affairs. He no longer can be too authoritarian because he will lose his highly skilled technicians, and he will make mistakes which are too costly. He can no longer ignore opinions of the other people, the opinions of his specialists and perhaps of his skilled workers. At the same time, the manager in this state of change must be in tune with the state of change in order to seize the opportunities which the state of change present, because in fact this development presents enormous opportunities if he has the skill and the alertness to take them. He should be, in fact, the leader of the change and not as is too often the case, a reluctant follower.

Development involves an entire economy, a complex whole which is composed of many inter-related parts. The extent to which this is appreciated and taken into account, by management and by those with managerial powers, is a major determinant on whether the forces of the nation complement each other or whether they are going to negate each other by being opposed. It is true that government leaders who control political institutions and key economic organs of the country have an important role to play in developing countries and must have a comprehensive view and are generally in a position to have it but it is equally important from the point of view of the manager of the individual enterprise. The more he has the ability to see the economy from a comprehensive point of view and the adaptations he has to make to the changes it involves, how he can benefit from those changes and how he can contribute to them, the better chance he has of succeeding in his own enterprise and furthering the development of the economy.

A long term perspective implies a certain measure of stability, a faith in the future and this is not easily acquired where political or economic circumstances are unstable. This is one of the problems of developing enterprises in many countries of the world. It obviously falls on the government to do what it can to reduce the uncertainties that impede economic development but in general and in many of the countries of which we are talking - management - private as well as public - has often considerable influence on the government and merely to say "government ought to do something about this" is not as a rule the answer. The government reflects the attitudes of a large number of individuals and the attitude of government and what the government is, is therefore normally conditioned by these people, among them managers or owner-managers. Unless the manager has this capacity for long-term thinking and has the capacity for seeing the economy as a whole he is unlikely to be able to make the contribution he should either to the economy as a whole or to the growth and prosperity of his own enterprise.

Finally, managers must have the necessary knowledge and skills to do their jobs. Management's ability to do their jobs properly will depend on its capacity to understand and master two elements, the first of which is:

> "The complex of factors internal and external to the enterprise which may affect its productivity, some of which may be beyond the control of the individual manager but nevertheless must be taken into account. These factors are economic, commercial, financial, technical, social, and psychological and may include considerations imposed by government policy and shortages or deficiencies in material or human resources.

Only when these factors are properly understood and the means which management has at its disposal for dealing with them are known and properly used, can an enterprise be operated at full efficiency."[1]

The second element is management's knowledge of how to use these techniques of management - the tools which it has at its disposal to deal with various situations. Like the tools in a skilled craftsman's tool kit, then are different tools for different needs. Managerial skill lies in knowing how to use them, just as a skilled carpenter can take up any one of his tools and do the most refined things with it. Summarising, managers' contributions to the efficiency of the enterprise are: first, the outlook and attitude, then the capacity for long-range thinking, finally the skill to know how to use what he has got to the best advantage.

Management Development

Those skills can be taught, any country which pretends to have effective industry must have an effective system for teaching its managers. However good your top managers are, it is not much use if they do not have a skilled managerial staff beneath them. There must be a comprehensive system which will be able to train the managers from the top to the bottom, as well as specialists in various management techniques.

There are various levels of people in management who have to be trained or perfected or developed. First of all there are the very top managers, the owners, the directors, the top directors of government enterprises and in some cases even senior civil servants. It is usually rather difficult to get these people to come to courses - for one thing they do not like to think they are being educated - but they will come to suitable conferences, exchanges with people of their own level and so on and that is one way of getting across some knowledge of management. The sort of things these men want to discuss are the problems from which top management suffer. Many bad management programmes have been done throughout the world because people have gone to countries that are perhaps less industrially developed and have put on courses for top managers which are really courses for middle managers in more industrially developed countries. These courses are generally failures because the problems of these people are very much the same whichever country they are in. They are of the same order and they do not want to listen to the problems of their departmental heads.

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[1] I.L.O., op. cit.

Then there are the senior management. These are the people at the heads of departments, big departments, senior staff positions, very often the "crown princes", the sons of owners who will inherit the business, people who are already taking part in top level decision making. These people can be given a really thorough course and it can be made to last as long as you can get them to come. As a basis, a good residential course may be the ideal. These are the who will rule industry tomorrow and they must have a thorough theoretical understanding of the basis of management and then do some practical work under supervision as well when they go back to their enterprises.

Senior managers and middle managers may be given courses of a more technical kind and here there are four main sectors - finance, production, markets, personnel - and a certain number of miscellaneous courses such as courses for trade union leaders and senior members who should have a certain knowledge and understanding of management. These people at senior levels may take complete courses on production management, on marketing management, on personnel management, and so on, but at the next level the specialists on management techniques which would also include the middle managers, such as these two spread over from the technical departmental staff to the general management, so the middle managers also may take specialist courses in any of this area, for example, in cost control, or budgetary control or in the production field, in production planning or in work study, or in quality control or in other specialist subjects down to the supervisory level, and even such things as storekeeping and stock control. It is very necessary to have well trained storekeepers.

Any country which is industrialising should have set up, possibly in one institution, possibly in a number of different institutions, certainly co-ordinated by somebody, the facilities for developing and training not only senior managers but also its various technical managers - in management, (I am not talking about technologists, that is the business of other institutions), and its specialists in various management techniques right down to the foremen. Until those facilities are available industry cannot have its trained staff.

Conclusion

In this brief discussion I have attempted to outline the vitally important role which management has in furthering economic development. Management has this role by virtue of financial power, in some cases, of status or official position. Unless it has also the attitudes and knowledge commensurate with its power the whole economy of the country will suffer.

(This lecture was delivered originally in English)

WORKERS' SELF GOVERNMENT IN YUGOSLAVIA

by B.V. Pribičević

Introduction

The Yugoslav system of industrial management or workers' management, is causing a good deal of discussion and interest not only in the country itself but also abroad. The first roots of the idea can be found in the works and theories of St. Simon and Fourier. The idea has been discussed in national labour movements since the end of the last century when the French syndicalists and especially Sorell, gave prominence to the idea of direct democracy in their writings. Then, especially during the first World War, there were numerous attempts in various countries to introduce the idea or to put it into practice. The idea today is also widely discussed in the international labour movement, and elsewhere. The case for workers' participation in management is not recognised today only by socialists, but also by other people including some very distinguished industrial sociologists who are not Marxist. In the article published a few years ago in the International Labour Review[1] under the heading "The Labour Problem in Economic Development", the American sociologists - Messrs. Clark Kerr, Harbison, Dunlop and Myers, say:

> "The industrial worker is seldom satisfied in a society where, largely without his participation, rules are made to prescribe his duties, to regulate the pace of his tasks and to govern his movement into and out of work and from one position to another ...."

All this shows you that in Yugoslavia we are not original in so far as the idea itself is concerned. Why then is there such an interest in Yugoslav experience? I should think the main reason for this is that in Yugoslavia you have the first example of the idea being put into practice in the whole country. It has worked for ten years and the economy has not gone to pieces. Attempts have been made in the past, in Germany, France, England, etc. For example, in England, during the First World War trade unions in some areas - particularly in Manchester and London - tried to establish working guilds; - enterprises operated and run entirely and exclusively by the workers themselves. The experiment lasted a few years and then with the crisis which started early in 1921 it suddenly disappeared. There are also well-known examples in Germany, in Soviet Russia immediately after the Revolution, and today in Israel; these however, are not conducted in the whole economy, but only in a few areas, in a few cases.

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[1] I.L.O. Review: Vol. LXXI, No. 3.

When I say "workers' management" I mean an institutional arrangement which enables workers, or the labour force employed in an economic organisation, to control directly and positively the process of management and organisation of work in that particular unit. I want to make a distinction between workers' management and various kinds of institutional arrangements existing today in many countries all over the world, developed and undeveloped, enabling workers to participate, to take part, to have a say in the process of management. German co-determination is one of the most important kind perhaps. In Britain and in some Scandinavian countries you have joint consultation arrangements. The case of Israel is well known. In India, for example, you have also a degree of consultation enabling workers to have some say. I should think that one of the main characteristics of all these versions is that they enable workers to have a consultative voice in managing enterprises, whilst in Yugoslavia it is they who have direct control. They directly manage the process of production.

Industrial management is a very complex procedure and it can be studied from many aspects. You can approach it, for example, from economic, sociological, legal, psychological, institutional, functional and some other aspects. I am not going to dwell on any particular approach or aspects. I think that for the purpose of this talk it would be of greater interest to give a general picture of the system, to show you the institutions which have developed, the main principles, - and to give you the main problems which we face today in Yugoslavia in further developing this system.

The third introductory remark I want to make is that workers' management in Yugoslavia is still in the process of development. It is continuously changing, new regulations are introduced, the system is improving in various aspects and all this has important implications. First of all, it is very difficult to give a precise or detailed picture of the system. Professor Hugh A. Clegg from Great Britain has said:

> "Any description of the Yugoslav system is bound to be wrong in detail for the Yugoslavs revise it at least once a year, sometimes more frequently."[1]

Socio-economic and Political Background

Before I start describing the main elements of the system let me give you a few indications of the general socio-economic background in the country in the two decades during which we developed the system of workers' councils. The main characteristic of this period is that they have been *years of profound social revolution*. The whole social, political and economic structure has been changed. From a relatively, or I might even say, an absolutely backward, capitalist country, before the second World War, Yugoslavia has become a relatively developed industrial country, which has built up the foundations of its industry.

The social-political framework has totally changed in the sense that the main elements of socialist society have been established. During this process we have completely nationalised industry, banking and trading organisations. Transport has been transferred almost completely to public ownership. Yugoslavia was one of the worst afflicted countries in the last war: Poland, Soviet Union and Yugoslavia suffered probably the most severe damage. Every tenth person in Yugoslavia was killed during the war, our industry was destroyed, some specialists say to the extent of 80 per cent. You can imagine that the country was faced with a very serious problem of reconstruction after the war.

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[1] Clegg, H.A.: A New Approach to Industrial Democracy, Oxford 1960, pp. 138.

During these years important changes also took place in the social structure of the country. Some classes which were important before the war are practically non-existent today; for instance, the small but influential class of landowners and class of capitalists. But I should say the more important is the change in composition of society if you look at the proportion of people employed in agriculture and in industry. Before the war, in Yugoslavia some 75 per cent. of the people were employed in agriculture; today the figure stands at about 50 per cent. with the remaining 50 per cent. in industries and in other sectors of urban economy. Important changes also took place in the country's international position. Immediately after the war Yugoslavia was one of the members of the Soviet Union bloc. After the break in our relations with the Soviet Union in 1948, Yugoslavia withdrew from the Soviet bloc and from all military blocs and is, today, one of the non-aligned countries co-operating on an equal basis with all countries that are beginning to recognise their independence. I think this international aspect of the problem had an important bearing on the evolution of our industrial structure.

You might ask why leading political forces abandoned the Soviet model of industrial organisation where the whole power is in the hands of State appointed directors, and adopted this course, whereby practically the whole power of management is vested with the people employed in the factory. There are quite a number of factors and I will only briefly state a few of the most important. I think one of the reasons was ideological. To our Yugoslav understanding socialism implies complete emancipation of man as a human being and this emancipation cannot be achieved until you have given, in this particular case, the worker the right to have direct say in arranging conditions at his workplace, because he spends the best part of his life at his workplace, and to our understanding you cannot have complete emancipation of a human being if you have only what some people have come to call political democracy where citizens have a right to vote once in two or three years to select representatives who will represent them either in local or federal government. We think that this principle of self-government must apply not only in the political scene, in political life; it has also to be applied in the industrialised sectors.

The second factor is very practical. We started to introduce the system by the end of 1949. At that time the country was at the height of its political and ideological conflict with the Soviet Union and the countries which stood behind it. Yugoslavia was excluded from the Cominform by Stalin on the grounds that it was abandoning essential socialist principles. We know now from the mouth of Mr. Khruschev that the actual reason was the fact that the leading political people in Yugoslavia refused to accept Stalin's supreme power, Stalin's right to decide what we were going to do in our country. Very soon after the break Yugoslavia found itself in a difficult position. The Soviet Union ordered an economic blockade on the country, trade agreements had been cut and all trade with Yugoslavia was stopped within two or three weeks. Very severe political pressure from all sides was brought to bear upon the country and at the same time we did not have good relations with the Western countries either. Some of you who have followed international politics of that period might recall that only a year previously, in 1947, we were at a point of starting war with the United States because of the shooting of American planes which flew over our territory. In these circumstances the leadership of the country wished to make a political move to mobilise maximum support from the people. They introduced a law in 1950 declaring that in accordance with the principle: 'land to peasants, factories to workers', the management of factories would be put in the hands of workers.

I would also say that during these difficult years we could not understand how a socialist country like the Soviet Union could behave in such a way towards one small socialist country. We thought that Stalin was somehow crazy or a maniac who could not understand and would not understand, or that he was badly informed by his subordinates. But soon we dropped these notions and started to think that something must be wrong in the Soviet system existing at that time, and we came to the conclusion that this was the bureaucratisation of the Soviet political structure which enabled one person to concentrate such enormous powers in his hands. We looked for the sources of this bureaucratisation, or deformation as they call it today, in political and social systems, and came to the conclusion that one of the main sources is total bureaucratisation of the economic system whereby State appointed officials have total control over enterprises. They have enormous powers, while the workers have no control over these officials.

Evolution of the System of Workers' Self-Government in Yugoslavia

To my mind these are the main factors which influenced Yugoslav leadership to take this course of action. The next point which I want also very briefly to present is the evolution of the system of workers' management. Immediately after the war, after nationalisation, we introduced a system which was very much like the Soviet system as applied also in other East-European countries: a system in which the Director appointed by the State and responsible to the State, but not to the workers, is given complete control and authority in the factory or other economic enterprise. This system lasted until 1950 - that is the first five post-war years. In 1950 the first law was passed on workers' management which ordered that workers' councils be elected in all enterprises employing more than 30 workers and other employees. A characteristic feature of the next few years, was that these workers' councils were given mainly consultative powers. In the second phase which covers the years 1953-57, the frontiers of the system were extended. I would say that the system grew in width; from industry it was introduced for example to transport, banking, trade organisations, and in 1955, 1956 and 1957, a variety of the system was introduced to social insurance, and cultural and educational institutions. The third phase, which started around 1957 was a big step forward; the powers of the various bodies of workers' management were increased. In these last five or six years the organs of workers' management were given real powers, real possibility to manage and to control the process of production. The system has grown in depth.

According to present regulations within a factory, the system of management has, in fact four echelons.

Structure of Workers' Self-Government at the Level of the Enterprise

1. The Working Collective is vested with important management rights. According to the law on the Management

of Enterprises of 1950 economic enterprises are "managed by working collectives directly and through the workers' councils as their representative body". All management organs are accountable for their work to the working collective. The working collective exercises its management rights in two ways: first, through the general workers' meeting, which has to be called by the workers' council at least once in three months, second by means of referendum. Individual workers are also invited to give their suggestions to the bodies of management.

2. The Workers' Council is the highest organ of management in the enterprise. In working organisations with less than 30 workers the whole collective constitutes the workers' council. In larger enterprises it is elected, annually by secret voting on the basis of the general, equal and direct franchise of the voters.

According to the relevant regulations, the fundamental rights of the workers' councils are as follows:

- to manage all the activities involved in production (what goods and what quantities are to be produced, at what prices and to whom they should be sold);

- to decide how net income of the enterprise should be distributed between funds and earnings;

- to decide on the expansion and modernisation of the enterprise;

- to use and distribute the means accumulated in the depreciation fund;

- to dismiss and employ new workers;

- to determine internal organisation of the enterprise, etc.

3. Management Board. Composition: it is elected by the workers' council and, in a way, it acts as the executive organ of the council. Its competence:

- it submits proposals to the workers' council which concern matters within the exclusive competence of the council;

- it elaborates and implements the directives of the workers' council in solving current economic, financial, commercial and other matters with the exception of day to day business which is the concern of the director;

- it decides independently on certain economic and others matters as authorised by law and the regulations of the enterprise.

The management board may have from 3 to 11 members, including the director who is a member ex-officio. At least three-quarters of its members must be directly engaged in production. The mandate of the board lasts one year.

4. The latest development has been in the direction of transfering certain management rights to "economic units" - workshops in larger factories. In some matters "economic units" have the right of decision whilst in others their deliberations have a consultative character. "Economic units" consist of all employed persons in a workshop.

5. The Director of the Enterprise. The Director is appointed by the People's Committee of the municipality on the basis of proposals made by a special commission, one-half of whose members are nominated by the workers' council of the enterprise concerned, and the other by the People's Committee.

The Director "organises and supervises the work of the enterprise in harmony with the decisions and directives of the workers' council and management board and relevant legal regulations. The Director is at the same time (a) "representative of the State" and (b) responsible for his work to the organs of workers' self-management.

What are the results? What is the experience gained so far? In some cases really great results and successes have been achieved in the process of bringing all the working people in factories into the process of management. We have in those enterprises which have succeeded a really democratic structure of power, a democratic system of management. But I am not going to tell you this is so in all Yugoslav factories; on the contrary, we also have factories and enterprises where the system still - after ten years - does not work. Workers' councils, management boards and other various commissions exist but they do not function as real management. The main achievements, on the national basis, are as follows:

- democratisation of economic structure;
- curbing and eliminating bureaucratic deformations in social life;
- high degree of identification of the worker with the enterprise;
- remarkable economic expansion in the last ten years which has been greatly influenced and facilitated by workers' self-government;
- greatly improved human relations in the place of work.

Results of workers' self-government have not, of course, been the same in all enterprises or branches of national economy. Practical experience shows that these results have usually been better:

- in larger than smaller enterprises, although there are many important exceptions to this rule;
- in industries with more stable labour force;
- in industries which for technological and other reasons do not have to be highly centralised. For example, railways are a case of an industry which has to be centralised, or again the system of distribution of electric energy which also has to be highly centralised for technological reasons. These are two industries where the system of workers' management does not generally function as well as in, for example, various branches of the metal and textile industries, etc.

Main Problems

Although in a general way the system of workers' self-government has succeeded in many fields, and has made considerable contribution to the social and economic progress of the country, it would be very mistaken to conclude that there are no problems in our system of industrial management. On the contrary, problems exist and Yugoslav scientists and people directly engaged in the work of further development of the system of workers' self-government have been, particularly in the last few years, very busy analysing various deficiencies and trying to eliminate them.

The first problem which we still encounter in many cases is some confusion as to the functions and competences of the several organs of management existing within every enterprise. The system we have for the time being is rather complicated. Each echelon, workers' collective, workers' council, management board, director, and now lately - economic units, has certain rights. These bodies and the competences of various managerial bodies very often overlap. So far, it is my opinion that we have not been able clearly to define what is the function of council, management board and director. General principles are quite clear; but these principles are mostly so wide that they do allow for considerable degree of difference in interpretation. This is the reason why you have frequently conflicts as to who is competent to do what, who has the right to make this or that decision.

Closely related to this is the problem of a certain discrepancy between the formal and informal power structure or decision-making structure within an enterprise. According to the formal structure, basic decisions are within the competence of the workers' council, next the management board, and the director only implements these decisions and is responsible for what we call day-to-day management. But in practice, - and I suppose this applies not only in Yugoslavia but in many other countries, - there is a good deal of difference between this formal and the informal power structure. In quite a number of Yugoslav enterprises you have a situation in which the most important decisions are not really made by the workers' council but by informal groups. Some people in Yugoslavia very often talk about a black three: the director, secretary of the trade union and president of the workers' council. These three discuss quite informally the issues which are going to be discussed subsequently at the workers' council meeting and, because of their relationships within the particular factory, they are able to push through practically all conclusions which they have arrived at in their informal closed meetings. This is a problem which exists in many factories. In the last few years there has been some success in overcoming these black troikes; powers of officials, directors and heads of departments have been to some extent reduced, and the powers of the workers' council and management board have been increased.

Another problem has been the tendency for factories, where the system is working well so far as participation of workers and managers is concerned to "eat up" the funds; a tendency to increase wages, to increase incomes at the expense of investment. In a country with as low a standard of living as Yugoslavia, and where the labour force in factories consists, in most cases of 80 per cent. of people who have only recently come from villages, this is not surprising. But it is a problem which has been discussed in the last year particularly and various suggestions have been made as how to overcome it.

A big steelworks may decide to build an enormous swimming pool, although the factory is located in a town which has an extremely serious shortage of school classrooms. In other cases beautiful hotels have been built around the Adriatic coast where workers recover their energies, but too much of the resources have been devoted in the past few years for this purpose.

Finally, as a result of the functioning of the system, in many cases we have what are called "localistic" tendencies. Communes, our basic political and territorial unit, have developed a tendency to close themselves in, to build their own industry, for their own purposes. As a result, in the past few years, about 50 or 60 new timber industries or enterprises have been built; much more than the country needs and we are now discussing what to do with all these industries because we obviously cannot sell all their products to Italy or France or some other country. There has not been enough co-ordination in the decision making process and this has led to some of the well-known difficulties of the Yugoslav economy.

A final point I want to make is that, in order to understand the system of workers' management in Yugoslavia one has to grasp the fact that it is only part of a wider social and economic structure. The whole structure has been geered to this principle of social self-government. As an example I will quote you one of the first provisions, included in the draft of the new Constitution of Yugoslavia which is being widely discussed. It reads:

> "The foundation of the social-economic organisation of Yugoslavia comprises free associated labour with the means of production and other socially owned means of labour, and self-government of the working people in production and distribution of the social product in the working organisation and the community.
>
> "The right of the citizen to participate in social self-government is inalienable."
>
> (The Constitution of the Federal Socialist Republic of Yugoslavia - A Preliminary Draft, articles 6, 36).

(This lecture was delivered originally in English)

MOBILISATION OF MANPOWER

by D. L. Snyder

Manpower mobilisation is a very interesting subject but also extremely complex and those of you who followed the discussions at the International Labour Conference in 1962 will be fully aware of the many points that the problem as a whole can raise.

The picture that comes to the mind of the average person when one talks about manpower mobilisation, is, I would suggest, that of swarms of workers on vast earth moving projects, building large dams, canals and roads through the intensive application of ordinary manual labour. I think also that in recent years more and more people have begun to look upon this with a certain degree of sympathy because what is happening in many of the developing countries, is that industrialisation is absorbing a very small portion of the labour force and for the most part the people in the working population are left aside in the industrialising process. And I think to most of us this is rather repugnant. It is probably the same reaction that we had in the industrialised countries during the great depression of the 1930's when a whole island of unemployed people were left completely outside the mainstream of the economic life of a country, existing on relief or relief works projects. We are recognising more and more the need to bring all sections of the population into the development process.

Briefly, what is the problem? It is clear that the amount of capital that the developing countries are going to get from external sources is not going to be sufficient to meet their needs and that they must in fact find ways of utilising to the maximum the resources which they possess in greatest abundance, in other words, their human resources. Many countries are trying to find ways of mobilising their manpower; particularly the newly independent countries of Africa. But the question is still open as to how most effectively to organise such work. To some extent the various schemes, have relied upon direct or indirect forms of compulsion and it is for this reason that the meeting of the Committee of Experts on the Application of Conventions and Recommendations in their report to the 32nd Session of the Conference last year called attention to the danger that many of these schemes presented. The I. L. O., thus, is really interested from two standpoints - not only from the standpoint of providing employment but also in relation to the instruments adopted by the Conference, particularly as they concern human rights.

I shall not attempt to weigh the pros and cons of compulsory and voluntary schemes, but would rather follow the suggestion put forward by the Committee of Experts in their report. You may be aware that they recommended that the I. L. O. should conduct research into "methods which without involving recourse to compulsion will enable maximum use of available labour".

The problem was discussed at some length in the Conference last year and the Director-General in replying to the debate stated that "We have not put sufficient efforts and thought into this; and we must try to make good the time we have already lost in a rapidly moving and changing situation." Since then the Office has been carrying out further research. Missions have been undertaken, particularly in Africa, to endeavour to see more clearly the implications of the schemes which are in operation.

The programme for unemployed youth that has been followed in the Congo (Brazzaville) I think would be particularly interesting to look at in some detail. I do not present this as a model scheme but as one which shows the ramifications and complexities of organising and carrying out a programme of this particular kind. The Congo was confronted with the problems familiar to most of the other countries of the region; the flight of the youth to the towns, the decreasing attraction of agriculture as a way of life, complete lack of qualifications on the part of the youth, most of whom were early school-leavers, insufficient employment opportunities in the towns, and of course, the social and even political danger of such a situation.

The government considered three possible approaches to the problem: first, they looked at the possibility of providing temporary employment by public bodies on roadwork, particularly maintenance, etc. Secondly they considered the possibility of incorporating the young persons into permanent labour formations for major work schemes on highways, bridges, dams, and similar longer-term types of projects requiring substantial investment. Thirdly, they looked at the possibility of establishing a more complex service which would constitute a real rescue, rehabilitation and resettlement effort in coping with the problem of unemployed youth.

They considered that the first solution - that of short-term works in the cities - as temporary, and that it would not in any way go to the heart of the problem. That it would, in fact, perhaps aggrevate it in that the young people employed in this way would become almost a permanent group of unemployed relying on relief works and liable to lay-off from one day to the next, depending on the availability of finance.

The second possibility - utilising permanent labour formations for major collective undertakings, organising them to some extent in a para-military service as has been done in other countries, had certain attractions but also did not properly go to the heart of the problem. So the government acted on the third proposed solution. But in doing so they realised that they had embarked upon a programme of some complexity and they set up a study group which would prepare the necessary legislation, choose the various sites for the projects, and map-out precisely what the objectives would be and what methods would be used. At the same time they established a staff college with the help of experts from France to train the cadres to put the scheme into effect. They realised that if a scheme of any magnitude were to be carried out the first major step would be to train the people who would supervise the young persons taken into the Civic Youth Service. They conceived that the first year of activity would be devoted almost entirely to the rehabilitation of the young men. I was most struck by the emphasis given to the need to re-educate, to reinvigorate you might say, the young unemployed. Before starting formal training they give training in physical education, some basic practical training to open-up further possibilities for vocational education, and in the process they sort out those young people whom they consider to be particularly qualified as potential leaders.

The scheme was originally considered as compulsory but it is important to note that for the first 250 places available 1,600 applications were received. Actually, the whole problem of forced or obligatory labour, really disappears when the young persons enlisted in these schemes are provided with opportunities for education, training and employment. As a result the report of the symposium on this item of civil works schemes for youth made two major recommendations - they recommend that they be organised on a voluntary principle and secondly they underline the importance of ensuring the resettlement and placement of the young persons on the termination of the work. It should be emphasised, however, that when young people are taken into youth services of this kind and in effect given a higher standard of living for a certain period of time, care must be taken to see that they are placed in employment in line with their training and their attributes - otherwise the problem is being aggravated.

Thus far I have been talking about manpower schemes for unemployed youth which we have described in some detail in the article which appeared in the September 1962 issue of the International Labour Review. In our research we have also been studying the more general schemes of manpower mobilisation. While these schemes are aimed primarily at economically productive work, they have the same effect as the youth schemes in mopping up underemployed or unemployed persons. While it may be difficult to distinguish at times the extent to which such schemes are voluntary, they are usually most successful when the workers are motivated by a desire to participate in the development process and to carry out projects for the common good.

Some of these schemes have been primarily local, others have been on a national scale. I think that the experience in Morocco, which has been somewhat in between and confined primarily to three provinces, is of very great interest. The appeal of the Moroccan scheme is that they have managed to carry it out in such a way as to enlist the support of the man on the land, in the local community, and to do it on a voluntary basis where he is happy to contribute his work for a nominal sum plus an allotment of food, made available in this case by the United States in the form of grain. They have carried out some remarkable work. The projects for the most part have consisted of irrigation, the planting of citrus and olive trees, the building of small dams, the building of canals, of roads - in some cases larger than just local roads - and in each case works which are aimed at the good of the local community. It is interesting that in some cases the work that has been carried out has been actually superior to that which might have been done by a central ministry of public works in that the local people, familiar with conditions of the soil, with the behaviour of the natural resources of the area, are able to construct and to build more realistically than the engineers. They have had this experience, for example, in constructing small dams. One dam, in a particular area, was designed and built by the local people, while another dam, not far removed, was built by the engineers of the central public works department. In observing the work of the engineers, the local people said that the dam would not hold when the first real flood tide came - and they were right. The engineers had not been familiar with the flow of the water in the particular stream and had not buttressed sufficiently a particular part of the dam, it washed out while the dam that the local people constructed stood the strain. This same experience has been duplicated in other types of work where canals that have had to be cemented up and dug, in some cases underground, in some cases even going under other streams, have been done entirely by the local people using nothing more than the average type of tool with no mechanisation.

I referred to the Morocco experience in some detail because one of the criticisms very often levelled at these schemes such as this is that they are uneconomic and undertaken purely to provide "made work".

I would like to refer to one more example which is to be implemented for Pakistan, within the framework of a Special Fund Project which the I. L. O. is carrying out in the field of manpower planning. The purpose of the project is to assist the Government of Pakistan to plan and co-ordinate a broad programme for the development and utilisation of human resources in relation to economic development, including the establishment of a Civil Works Board to determine the means of employing surplus manpower. It is envisaged that two major types of projects will be undertaken. Under the first category they would be setting up projects essentially of the same type as I talked about in relation to Morocco. They would differ from locality to locality but would be aimed in each case at creating something of immediate value and use in the local communities. Illustrations are the construction of small canals, minor irrigation works, embankments, desilting and maintenance of canals, tree planting, development of wood lots, construction of small schools, dispensaries, graineries, community wells, water supply projects and local roads. For the most part they envisage that the labour working on this type of project aimed at doing something for the local community, would be drawn from the community essentially on a voluntary basis. The other type of project would be of wider scope and would include irrigation and flood control schemes, drainage and reclamation of saline and water-logged lands, soil conservation, afforestation and major road development projects. On this type of project they would pay a certain nominal wage. In this scheme, as under the Moroccan scheme, it is envisaged that surplus foods, in this case wheat, made available under Public Law 480 of the United States, would be made in part-payment of the workers on the projects.

I have presented these concrete examples of manpower mobilisation schemes to give you some idea of the developments that are taking place. I do not think that we here in the Office can draw definitive conclusions about exactly how they should be organised. I would hope that certain guiding principles will eventually emerge from our research which may be of practical use to the developing countries.

The main point I would make in closing is that at first consideration the establishment of manpower mobilisation schemes may appear to be a fairly easy and a rapid way of absorbing unemployment and underemployment in the developing countries. When examined more closely, however, they are seen to involve many problems of both a technical and practical nature. None of the problems can be considered in isolation. They have to be attacked on a broad front.

Consideration has to be given to the human rights aspects, to organisation and finance, to incentives and to the provision of training and education and a sense of civic responsibility - at the whole range of activities that are involved if such schemes are actually to be made effective.

(This lecture was delivered originally in English)

SOCIOLOGICAL ASPECTS OF EDUCATIONAL PLANNING

by R. Girod

The concept of educational planning is one that has caught on very quickly. Hardly more than ten years ago it was familiar only to planners in communist countries, and besides, even in these countries, educational planning was relatively unimportant in relation to economic planning, particularly that of heavy industry. Today a great deal of attention is paid to this subject throughout the world.

U.N.E.S.C.O., for instance, is sponsoring the application of three vast aid programmes for educational planning in Africa, Asia and Latin America.[1]

Recently the O.E.C.D. organised a meeting of West European and North American experts to discuss the problems of the harmonisation of educational investment and other problems concerning economic and social policy.[2] Similar problems were also discussed during the Third Conference of European Education Ministers.[3] Finally, the XXVth International Conference on Education (Geneva 1962), after detailed discussion, issued a recommendation on educational planning.[4] Passed unanimously by the 90 participating countries, it lays down the principles of educational planning. For the conference itself the Bureau of International Education made a study of present policy relating to educational planning in different countries.[1] Seventy-five countries completed a questionnaire on this subject. The study shows that there is a tendency to rationalise educational practice in relation to general policies aiming at a higher standard of living. Although varying very widely in degree and application such policies are quite general. But in many cases aims are not put into practice and planning remains more theoretical than effective. However, in spite of this, genuine and important achievements are not lacking, and, in any case, the concept is now generally accepted.

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[1] Planning of teaching in Asia, U.N.E.S.C.O./ED/194, 6 August 1962, 34 p.; Conference on education and economic and social development in South America, U.N.E.S.C.O./12C/PRG/16, 24 August 1962, 12 p.; Meeting of Ministers of African countries participating in the Addis Ababa plan (for educational planning in Africa), U.N.E.S.C.O./ED/191, 237 p., March 1962.

[2] Washington Conference, 16-20 October 1961, on economic growth and educational investment (several brochures published).

[3] This conference took place in Rome, October 1962.

[4] XXVth International Conference on Public Education: 1962. General report and recommendations, Pub. no. 245, International Bureau of Education, 183 p., Geneva 1962.

Without entering into discussion of the various kinds of educational planning, and the results that have been obtained so far, this lecture will attempt to outline the main causes for the rapid development of this concept. These can be divided into two principle groups: those which work in depth and have created the conditions under which educational planning has gradually evolved, and those that more directly explain the present success of such ideas. There is a considerable imbalance between the educational demands of the society, and the so called "natural" development of the educational system itself. The causes have themselves revealed this situation and at the same time made it possible in the most widely differing political régimes, to adopt methods which, to a certain extent, permit control of the development process.

1. Definitions

A U. N. E. S. C. O. publication[2] says that the planning of education implies a concept of growth "not as an automatic process which has only to be primed by regular renewal of resources, but as implying options and priorities established according to objective forecasts". This definition is particularly valuable because it embraces all the present forms of educational planning, whether imperative or indicative, whether on a local, national or international scale, whether autonomous or alternatively, integrated in general planning schemes for economic and social development. But it should be pointed out that the forecasts and options alluded to in the quotation are not related simply to the facts of education itself. They are concerned mainly to provide the necessary conditions for an improvement in the general standard of living. It is necessary to recognise this close link with social and economic planning in order fully to understand the significance of educational planning. A programme destined simply to develop the school system, designed and carried out within that framework, does not really come under the heading of educational planning. Besides, planning implies more than simple forecasting: it calls for concerted programmes, and, at the least, the definition of objectives. As far as is possible, both plans as well as analyses and forecasts are expressed in statistical form.

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[1] Educational planning: a comparative study of education. Pub. no. 241, International Bureau of Education, Geneva, 1962.

[2] U. N. E. S. C. O. Bulletin, May 1962, on "Educational Planning in the World", p. 173.

Briefly then, the major characteristics of educational planning are a methodical programme for the growth of the educational system, defined in terms of general policies for economic and social growth, as a result of quantitative studies.

2. Basic Reasons

The basic reasons for the present day development of the concept of planning are long standing. They embrace a whole group of factors resulting from demographic, economic, political and cultural changes since the beginning of the industrial revolution. These have created both new needs and new means.

One of the most obvious of these factors is the growth of the population as a result of the fall in the death rate, and the increasing concentration of this population in urban agglomerations. This in turn is related to the development of trades: there are increasingly fewer agricultural producers in relation to the growing number of industrial workers, and, particularly in the higher stages of development, of workers in tertiary sectors.

Urban and industrial life give rise to educational needs that the old system of oral transmission of popular culture from one generation to another no longer satisfies. Neither can the modern farming population do without teaching. As a result there has been a considerable growth in the educational needs of the population. Happily the means to meet this need are provided by economic growth, in small amounts to begin with (during the period of the building up of the industrial infrastructure, largely corresponding to the 19th century in Europe), subsequently in greater quantities.

Both family incomes and collective resources have grown. The age at which a child goes out to work has been progressively pushed back, so that he can benefit from schooling. And, as material conditions within the family improve, the sights of ambition for the children's future tend to be raised. Efforts are made to see that they get the education which will allow them to climb the social ladder by a rung or two. Except in times of acute crisis this upward movement is relatively easy because of the structural changes which the industrial revolution has brought about (growth of industry and the tertiary sector, as well as the towns). The Western world was the first to benefit from these phenomena, but, as industrial civilisation develops, similar transformations are taking place throughout the world.

Mention should also be made of important changes in the political, practical, scientific and administrative fields.

The steady process of transfer of power to the mass of the population, has permitted increasing pressure on social policy towards the practical achievement of the best things that life has to offer beginning with culture. At the same time the tendency towards resignation, a general characteristic of the working mentality in traditional society, has been replaced by a more aggressive attitude. Modern man believes in the need and the ability progressively to improve his lot: progress for him has become normal, and he no longer believes that the son must follow in his father's footsteps just as the days and the years succeed each other.

Besides, more recently modern man has realised that the progress he desires can be speeded up through social policies tending to put aside for investment a certain portion of the product of collective labour, with a view to improving the general standard of living in five, ten or twenty years' time. The tendency to "capitalise" work, which existed first of all only in certain classes of the population, is becoming more general. This is more or less the thesis of Pierre Baudet in his book on French planning experience[1] in which he maintains that men realise that the better future which they hope for is no longer individual but collective in character. He adds that realisation of this aim is seen as dependent more and more upon a common and present effort. The idea is of a developing world in which the future depends upon the present general situation, and the possibilities for development arise as a result of the substitution of individual behaviour on a day to day basis for conscious, collective and directed action, with a view to assuring a progressively brighter future.

The growth of science puts into the hands of administrators the tools with which to extend and rationalise their work. This is the age of large-scale organisations, undertakings, trusts, international economic agreements, the developing public sector and so on. The orientation of such complexes can be directed to a certain extent by a relatively small number of people. In any case it is easier to direct systems of this kind than the former far less concentrated market, in which public enterprises, in their early stages, were insignificant. To many it would seem that the people who control these large organisations, the bureaucrats and technocrats, are the real ruling class of modern industrial society, whether socialist or non-socialist in form. Because of its interests and its training this class is attracted by the idea of rational policies destined to raise the standard of living. The policy itself assures and consolidates the inherant progress, through a further strengthening of the network of large organisations, and by encouraging the tendency of the mass of the population to become increasingly less interested in politics, to give the leaders a free hand in exchange for real improvement in living standards.

It should be noted, besides, that it was in the thirties, at a time of grave economic crisis, that, both in the Soviet Union and in the Western world, the State as an entity first undertook the elaboration of large-scale planning. Clearly this was done in different ways according to the differing political régimes: there is a wide historical range stretching from Stalin's five-year plans to Roosevelt's "new deal", with Hitler's economic mobilisation of Germany somewhere in between. Since that time these experiments have been extended particularly during the second world war (war economies) and its aftermath (reconstruction, the Marshall Plan, etc.). Such plans have allowed for the increasingly systematic application of modern economic and social science in order to direct national effort - at least in the major sectors - in terms of general objectives defined by the government. This tendency has become steadily stronger and finally resulted in present day forms of planning, ranging from communist over-all plans, which vary quite widely from one socialist country to another, - to development programmes for underdeveloped countries, and the decentralised and indirect economic and social planning, - sometimes highly effective - of the American pattern. There are also various intermediary forms used in different countries, particularly in France where planning, though centralised, and global, is largely indirect.

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[1] Paris, 237 pp., 1958, p. 25-26.

The East-West conflict places increasing emphasis on these various planning programmes, since by the very logic of the competition the protagonists in the cold war are forced to work out ways of avoiding crises at home, and, as far as possible, to further successful economic and social policies both in their own countries and with their allies.

Since 1945 international organisations, whether world-wide or regional, have played a considerable part in the support of planning, by increasing the interchange of ideas between specialists, by facilitating comparative studies of different policies, and by spreading in a thousand different ways the idea of accelerated social and economic progress through large-scale governmental and inter-governmental programmes. It is significant that in Asia, Africa, Latin America and in Europe, international organisations are active in their promotion of educational planning, which in turn is linked to larger programmes aimed at greater rationalisation and co-ordination of economic and social policies in different countries.

State schools offer an excellent basis for planning since the public authority has total control over them. But it is also true that in those countries where private schools exist in large numbers, these are usually in practice semi-public.

3. Immediate Causes

In most countries many of the elements which have been outlined so far existed for quite some time before the idea of planning the growth of educational institutions took shape. Let us now examine how this idea evolved. We can distinguish systematically three distinct cases: that of communist countries, that of North American and Wester-European countries, and that of the countries, broadly speaking, in the underdeveloped regions. Groupings of this kind are very crude, and it would really be more suitable to examine the separate case of each country. Although many of these basic causes have been influential in all countries, in some respects their effects are different according to the economic conditions, the political and social structures and the general way of life of each individual country.

In the Soviet Union economic planning has in theory been operative since 1917. But it was only towards the year 1930 that general large-scale programmes were put into operation. There was a great need to make up the prevailing food shortages and to push ahead with industrialisation and the collectivisation of agriculture. In the Soviet plans of that time education was only of secondary importance, but nevertheless a very large number of schools were built in the Soviet Union. Subsequently, with the menace of Nazi aggression, Soviet planning took on the aspect of intensive preparation for war. Later came the period of war and then that of reconstruction. And it is only in the last ten years or so that the educational and cultural objectives inherent in the building of communism have assumed high priority in Soviet planning. One of the objectives of present long-term Soviet planning is to transform cultural activity in a concrete sense, and make it available for all. This is the long-term objective that Premier Khruschev associated with the educational reforms begun in 1958. This means that raising the general standard of education of the entire population has become one of the general aims of Soviet policy. But it is at the same time one of the ways in which this policy is carried out since the recent educational reforms are designed to increase the available number of 'cadres' and highly qualified workers in relation to the needs implicit in the implementation of the plan's industrial, social and scientific programmes. This need to increase the number of qualified workers and technicians to make full use of production potential is universally recognised, as will be seen when we turn to the situation of the Western world and the under-developed countries.

Particularly interesting in this respect is the Soviet reply to the questionnaire of the International Bureau of Education, which includes the following passage:

> "The development of socialist production as the economic basis of Soviet society is inconceivable without provision for the training of highly qualified technicians, and without raising the cultural and technical standards of the entire working class."[1]

The educational planner is expected as far as possible to speed up this cultural and technical improvement without which the Soviet Union, according to its leaders, would not be able to pursue the building of a new, and, in their eyes, superior society. Give and take a few verbal nuances, this is also what the West calls the need for greater efforts in "human investment". Since 1945 Soviet planning techniques have been adapted to the needs of different countries within the communist bloc.

In Western Europe and in the United States, advanced specialists already recognised the need for educational planning at the time of the great depression. However, a whole section of public opinion and many political leaders called for a reduction in the number of secondary school pupils and university students, as a means of combatting the considerable unemployment among the intellectuals. This simplistic solution was opposed by others who, on the contrary, advocated an increase in higher education coupled with measures to prevent further crowding of 'dead-end' professions, and programmes to encourage young people to enter expanding professions. Mr. Walter Kotschnig's book published in 1937 as a result of a study undertaken under the auspices of the International Bureau of Education, expresses this idea very clearly. Briefly his argument is the following:

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[1] Op. cit., p. 179.

(a) Non-manual unemployment does not arise from a saturation of needs but from a temporary economic situation (in fact the number of doctors, teachers and engineers falls far short of real needs if compared with the number of sick people, of children and of factories which should be built).

(b) Increase in secondary school and university attendance cannot be halted because it stems from the general development of industrial society (greater sense of equality, urbanisation, changes in profession, rising living standards, the development of bureaucracy, the changing status of women, etc.).

(c) The answer is to plan education in terms of the new needs of a society in transformation.[1] Planning would aim first of all at an increase in the availability of better educational techniques for the mass of children, because this is a good thing in itself and also because the collective production potential will also in this way be put to better use through the increase in the number of specialists capable of reviving activity in the more valuable sectors.

This kind of thinking gained ground relatively quickly in several Western countries and after the interruption of the war and the immediate post war period, it became clearly dominant. From 1960 onwards educational planning was accepted throughout the Western world as the key to the solution of problems raised by the "bulge" of school-age population. But in practice educational planning still has far to go. The success of this concept is due largely to the fact that its protagonists among the younger generation now occupy influential positions. To them making culture available to all, and the large-scale organisation of activities, including education, are commonplace, whereas these same ideas would have terrified their forerunners in office.

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[1] Walter M. Kotschnig: Unemployment in the Learned Professions: an international study of occupational and educational planning, 1937, pp. 347.

But there are other reasons for this success. Doubtless one of the principle ones is that of competition with the communist bloc; competition which in the intellectual sphere has become more acute since the launching of the first sputnik. The effects that Russian experiments of this kind have had on Western educational policies and on technical and scientific aid are still very considerable. The Western world suddenly saw that its hitherto unchallenged position of leader in these fields was no longer valid. The Soviet Union had caught up with them and was even surging ahead. The West intends to make up the lost ground as rapidly as possible.

The following text makes this quite clear:

> "...... it is realised increasingly that education is a means of ensuring economic growth, which, since the end of the war, has become one of the main objectives of national policies throughout the world. In underdeveloped countries economic development alone provides the answer to the problem of raising the standards of living. In industrial countries it is the main sphere of competition, - the symbol of the ability of various political systems to overcome their economic and social problems. Competition has become even greater since the Soviet Union issued a challenge to the West on this specific point .... The importance given to education in the Soviet planning of production has certainly been one of the important reasons for the general re-evaluation in Western countries of the role of education in economic and social development."[1]

There are other major reasons for the manifest interest of Western countries for educational planning. These are: economic prosperity, the high birthrate in the immediate post-war years, the high rates of voluntary school attendance, the shortage of 'cadres' and the realisation of the value of human investment, the need to popularise university studies, specialist research, etc. Something should be said about each one of these points.

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[1] See for instance, The Determinants and Consequences of Population Trends, United Nations, 404 pages, 1953, p. 83.

Circumstances which are not yet clearly understood resulted in a reversal of the fundamental trends of Western economy between the years 1935 and 1945; stagnation was replaced by expansion in all sectors.

This change was experienced too, as far as demographic growth is concerned. The birthrate increased, marriages tended to be more numerous and take place earlier, resulting in a considerable increase in the number of births. In France the annual number of births rose from 650,000 in 1945 to around 830,000 in 1960. In the United States the annual number of births rose from a pre-war average of 2.2 million to 4.2 million in the 1960 period. Other Western countries experienced similar increases. Under a system of compulsory schooling more births mean more schoolchildren. Hence the need for school building programmes, and the training of teachers. It is clear that under these circumstances sooner or later plans based on forecasts will have to be adopted.

A further phenomenon which also lends itself to forecasting is the rise in voluntary attendance of higher and non-compulsory educational establishments. Since 1950 this rate has been rising in relation to what it was in the period 1930-1950. In the United States, where before the war approximately half of the total school-age population attended secondary school, the proportion is now approximately three-quarters. In France in 1930 only one child in ten had the possibility of continuing his education at this level, now the proportion is nearly one in two. The percentage of university students has also gone up, but to a lesser extent. But even here, such increase as there is (an average of 4-5 per cent. of each age group compared with an average of 2-3 per cent. in the 1920's in most European countries), although insufficient in relation to needs, is causing a revolution in academic circles, where the increase is spoken of as a 'tide' or 'invasion'. In fact these are only the first and clement indications of a phenomenon which will surely progress in time to its logical conclusion: the extension of higher education to the entire population.

As long as collective resources were not even sufficient to ensure a vital minimum for the mass of the population, this aim seemed utopian, but it is becoming less so in countries which are nearing the stage of economic prosperity or affluence in Galbraithian terms. This is, to differing degrees, the case of the most advanced Western countries. Analyses made of this type of economy are well known. The principle conclusion of such studies is that, with the exception of certain distressed areas (decadent rural regions, slum areas etc.), the large majority of the population has acquired a considerable degree of well-being. Only a certain portion of the national effort is necessary to produce the really positive elements of this level of existence. The rest is wasted in useless activities which are sometimes even harmful. Leaving aside war production which calls for special analysis, such activities consist in the sale of useless articles through obsessive publicity, the production of noisy vehicles, of various kinds of ultra-sophisticated drinks, and of amusements which appeal only to the baser instincts, etc. By comparison certain sectors are neglected although they are of capital importance for the progress of civilisation. These generally speaking are those which are put into the hands of the State, and semi-public bodies: public health, social security, highway improvement, education, scientific research, etc. The only valid function of the parasitic branches of our economy is that they provide incomes for those who are employed in them. In spite of some recessions Western countries have been going through a period of expansion during the last 15 years. Productive capacity has continued to increase not only through technical innovation but through greater capital resources, open markets, in fact everything which leaves the way open for free initiative. But it is clear that one of the aims of economic and social policy which is being increasingly emphasised (the actions of the Kennedy administration are highly significant in this sense), is the need to prevent as far as possible the growth of this vast "wasted" sector, and to encourage the development of activities which have a public value, particularly educational services.

The growth in production potential in the Western world is one of the main causes of the great need for an increasing number of individuals capable of carrying out administrative and executive functions.

In relation to the tasks which are now technically and economically possible, highly qualified manpower is in short supply. This is true in all expanding specialist branches, including most professions which call for technical, commercial or university studies rather than apprenticeship in the usual sense of the term. According to studies made in Switzerland, it has been estimated that the economy of the country could make use of twice the number of specialists, than the number turned out by the various establishments for higher education. It is likely that, given a similar stage of development, this proportion holds true in other countries.

It is surely clear that given such conditions expenditure on education amounts to investment of the greatest economic importance, hence the increasing emphasis on the value of educational investment. Formerly school expenditure was written off as a loss in the same way as various other forms of public expenditure, since it did not bring in profits in the usual sense of the term. Today this attitude is being abandoned little by little. The ability of communities to work intelligently as a group and to find reasonable solutions to social problems now appears as a decisive factor in the improvement of their wellbeing. This ability is growing. In other words it is itself a function of teaching, technical training, in fact of education. Together with the scientist and the organiser, the school teacher has suddenly become one of the key figures in Western theories of development. A whole economic edifice is being formed in relation to education, in an attempt to increase human investment, to direct people's careers in terms of needs, and to develop productivity.

Educational systems as we know them in the West have been gradually built up piece by piece over a long period. They bear the stamp of a period in which the gap between the cultivated individual and the mass of the people was quite wide. Behind a seemingly modern facade these systems continue to compartmentalise into schools for the élite, schools for the middle classes and schools for the general population. To the extent that such a system is left to its own organisational laws it tends to perpetuate inequalities which are in contradiction with the present day concept of democracy. It is for this reason that there have been many attempts to breathe new principles into these old mechanisms of social selection, to influence the ordinary course of every day schooling, in terms again of the objectives; in this case the objective of equal opportunity. To this must be added the general improvement of the educational system, and the aim of greater productivity.

The last factor which I wish to mention is the improvement in analytical methods applied to economic and social situations, to forecasts and operational calculations. In the attempt to rationalise their programmes statesmen and public administrators can now make use of a whole range of methods which their forerunners did not have: polls, Leontief 'intput-output' tables, national accountancy, electronic programming machines and calculators, etc.

Western countries, having realise that their present schooling methods are not satisfactory for the attainment of economic, cultural and social objectives, at the same time, have together a remarkable group of specialists in economic and social sciences. They naturally tend therefore to develop programmes to stimulate their educational systems. Steady and rational development is replacing haphazard and slow growth.

In the underdeveloped countries the main problem concerning educational policy remains the struggle against illiteracy. But in spite of this, and given an entirely different stage of economic development in much more difficult circumstances, all the problems mentioned above also exist. Available resources instead of being abundant are extremely rare. The difficulty, in this case, is to establish criteria according to which it is possible to apportion in a rational economic manner, investment destined for educational purposes and investment destined for development of the vital sectors of agriculture, industry, etc.

In the underdeveloped countries the influence of international organisations is considerable especially as far as thinking favourable to the concept of educational planning is concerned. Technical assistance missions, expert meetings and higher training programmes in this respect all deserve special mention. They give an outline of the needs of certain groups of countries and suggest practical solutions to meet these needs.

This lecture was delivered originally in French.